

5. HydroBase Operations

Most of the information provided in the windows in HydroView_MPE and RiverPro are stored and edited in the Hydrologic Database (HydroBase) component of the WHFS. This chapter describes how these data can be accessed, reviewed, and edited. The windows on the following pages are used in the operation of HydroBase. Where appropriate, a source window(s) (the window used to access the featured window) is provided in the background as a reference.

As noted in Chapter 1, this manual addresses some of the basic functional uses of HydroBase - the routine display, editing, and addition of hydrometeorological data and information. The manual does not address the functional aspects of HydroBase in detail but provides an overview of the various screens that can be accessed in order to review or edit data in the database.

Maintenance of the static information in HydroBase is generally the responsibility of the Service Hydrologist, Hydro Focal Point, or designee. Access to HydroBase should be limited in the WFO through use of the **optional password function** in order to ensure its integrity. Additional information regarding the password function is provided in the Getting Started section and in the **HydroBase Administration Window**.

Note that many of the window options allow making a selection either by using the mouse (point-and-click) or by using a "hot key" (a one or two key shortcut to performing an operation; e.g., Ctrl-X can be used to exit from HydroBase). Selections within HydroBase that are not applicable are greyed-out (e.g., the reservoir information menu selection will be greyed-out if a forecast point that is not a reservoir is selected on the station listing display).

Active HELP buttons are provided for the Dam Catalog screens only.

Some screens in HydroBase refer to various data codes for some parameters. These codes are as referenced in *Standard Hydrology Exchange Format, Weather Service Hydrology Handbook No. 1*.

Troubleshooting HydroBase

Most errors associated with the use of HydroBase will be displayed in a pop-up window or an error dialog shown on the screen. Generally, the pop-up window states the nature of the error (e.g., a date entered in an improper format). The HydroBase application usually continues once the error is corrected.

Getting Started

Method One

- 1) From the workstation D2D screen, locate the mouse pointer on a dead area (no windows displayed) and single click the right mouse button. The **System Control Menu** will be displayed.
- 2) Click left mouse button on **HydroApps**. The **Hydrologic Applications Menu** will be displayed.
- 3) Click left mouse button on **Hydro Database Manager** in the **Hydrologic Applications Menu**. The **HydroBase Root Window** will be displayed.

Method Two

- 1) From the D2D display, click on **Surface** on the Menu Bar.
- 2) Click left mouse button on **HydroApps**. A menu will be displayed.
- 3) Click left mouse button on **Hydro Database Manager**. The **HydroBase Root Window** will be displayed.

Password Function - If the **password option** is in use, a dialog box will be displayed when HydroBase is started, requiring that the password be entered before the **HydroBase Root Window** is activated. If no password is in use, the error dialog box shown in Figure 9 will appear instead, reminding the user to set a password. The password is set under the **Setup/Administration** option accessed through the **HydroBase Root Window**.



Figure 9. HydroBase Root Window with Password Reminder Message

Exiting HydroBase

From the **HydroBase Root Window**, select **File** (Menu Bar), then *Click* on **Exit**.

HydroBase Windows

The following pages present the various windows used in the operation of HydroBase. A list of those windows is provided below.

HydroBase Windows

Window	Use	Page
HydroBase Root Window	Starting point to access all operations within HydroBase	5-7
Preferences Window	Customize the display features of the HydroBase windows	5-9
Add Location Window	Add a new location to the database	5-11
Modify Location Window	View and edit location data from the selected station	5-12
Contacts Window	View and edit contact data and information from the selected station	5-13
County/Zone UGC Window	View and edit county and zone Universal Generic Code (UGC) information from the selected station	5-14
Data Sources Window	View and edit data source information (DCP, Observer, and Telemetry) from the selected station	5-15
River Gage Window	View and edit river gage information and data from the selected station	5-17
Flood Category Window	View and edit flood category definitions for a selected station	5-18
Impact Statement Window	View and edit impact statement definitions for a selected station	5-19
Flood Damage Window	View and edit flood damage statements for a selected station	5-20
Rating Curve Window	View and edit the rating curve for a selected station	5-21
Unit Hydrograph Window	View and edit unit hydrograph information for a selected station	5-22
Crest History Window	View and edit data and information for historical crests for a selected station	5-23
Low Water Window	View and edit data and information for historical low water occurrences for a selected station	5-24

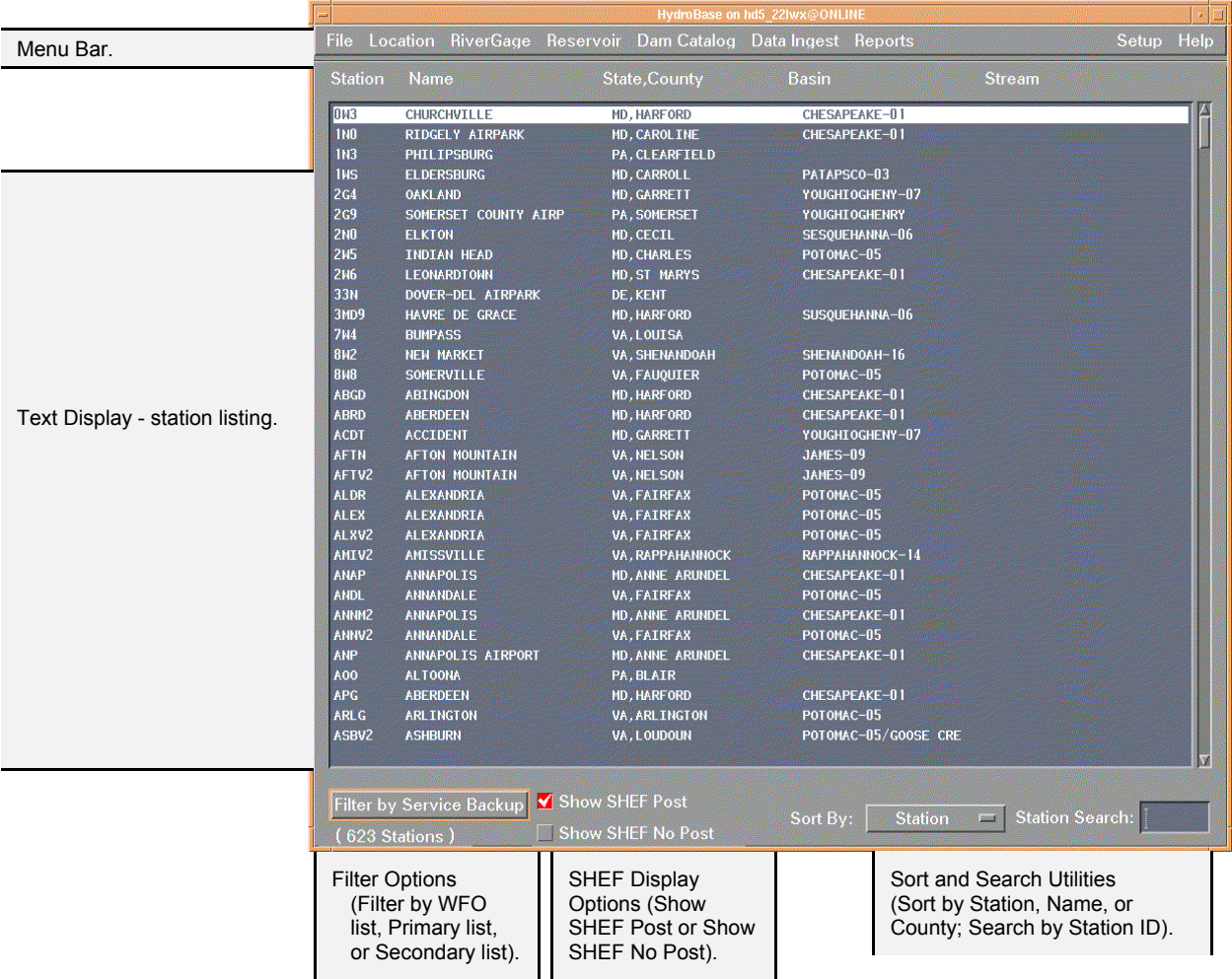
HydroBase Windows

Window	Use	Page
Benchmark Window	View/edit data and information for permanent survey benchmarks for a selected station	5-25
Datum Window	View and edit data and information for gage datum (elevation of gage zeros from mean sea level) for a selected station	5-26
Description Window	View and edit general descriptive forecast point information for a selected station	5-27
Gage History Window	View and edit historical gage information for a selected station	5-28
Publications Window	View and edit information about publications that contain data from a selected station	5-29
References Window	View and edit information about references that describe where data records from the selected station are kept	5-30
Reservoir Window	View and edit reservoir information from a selected station	5-30
Dam Catalog Window	View and edit information on dams within the area of interest.	5-34
Dam Catalog Window (Information Examples)	Display examples of data and information available through Dam Catalog	5-35
Dam Catalog Window (Dam Break Information Example)	Display an example of dam break forecast data and information available through Dam Catalog	5-36
Ingest Filter Window	View and edit ingest filter information (controls the flow of data into HydroBase)	5-38
Quality Control and Alert/Alarm Limits Window	View and edit quality control parameters for data flowing into HydroBase	5-39
Purge Parameters Window	View and edit parameters controlling the storage requirements for observed and forecast data and products	5-40
Flood Report Window	View flood hydrograph information at those locations that experienced flooding during the past twelve months	5-42

HydroBase Windows

Window	Use	Page
Text Reports Window	View E-19 reports, cooperative observer reports, a sorted station list, a station classification list, and a service backup list	5-43
Administration Window	View and edit program administration information and set the HydroBase access password	5-45
Cities Window	View and edit city and town reference information	5-46
Reference Fields Window	View and edit the data contributors reference information (e.g., data sources, measurement devices, equipment owners, sponsors, and supporting offices)	5-47
States/Counties/Zones Window	View and edit state, county, and zone reference information	5-48
RiverPro General Parameters Window	View and edit various RiverPro parameters	5-49
RiverPro Forecast Groups/Points Window	Define forecast groups and order the groups and their forecast points for tailoring RiverPro displays and generated products and to select the primary stage parameter to use for each forecast point	5-50
Radar Locations Window	View and edit information for radars within the HSA	5-51
Stage II Parameters Window	View and edit data and information for Stage II parameters for selected radars within the HSA	5-52
Areal Definitions Window	View and edit areal definition data and information for zones, counties, basins, and reservoirs within the HSA	5-53
Vector Definitions Window	View and edit vector definition data and information for rivers, streams, highways, and roads within the HSA	5-54
NWR Transmitter Window	View and edit NOAA Weather Radio (NWR) transmitter information	5-55
Time Series Group Configuration Window	Customize time series displays for Group mode	5-56

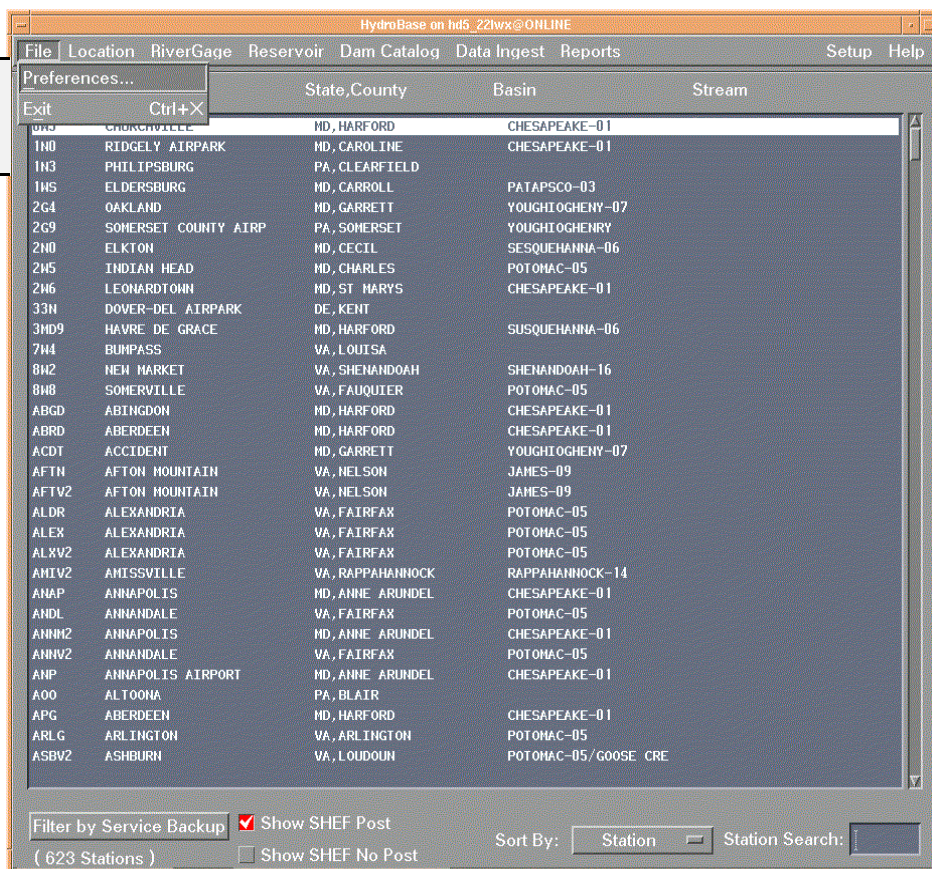
HydroBase Root Window - Starting point to access all operations within HydroBase including station selection.



Notes: Due to the large volume of data and information accessible by HydroBase, data can only be viewed and edited from one station at a time.

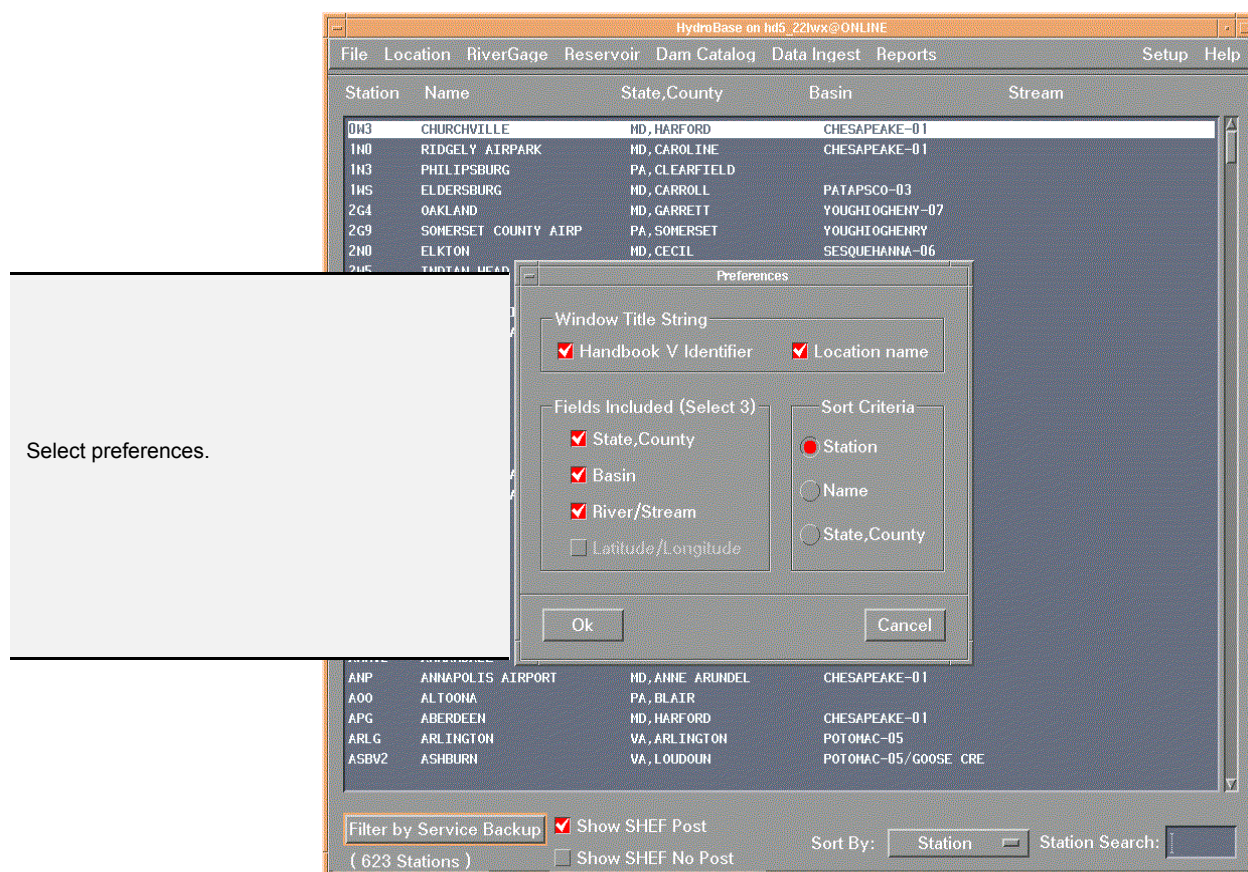
HydroBase Root Window (File selected from the Menu Bar) - Use this selection to define Root Window preferences and to exit from HydroBase.

Select Root Window preferences or exit HydroBase.



Access this selection from the **Root Window** by *Clicking* on **File**.

Preferences Window - Use this selection to customize the display features of the HydroBase windows.

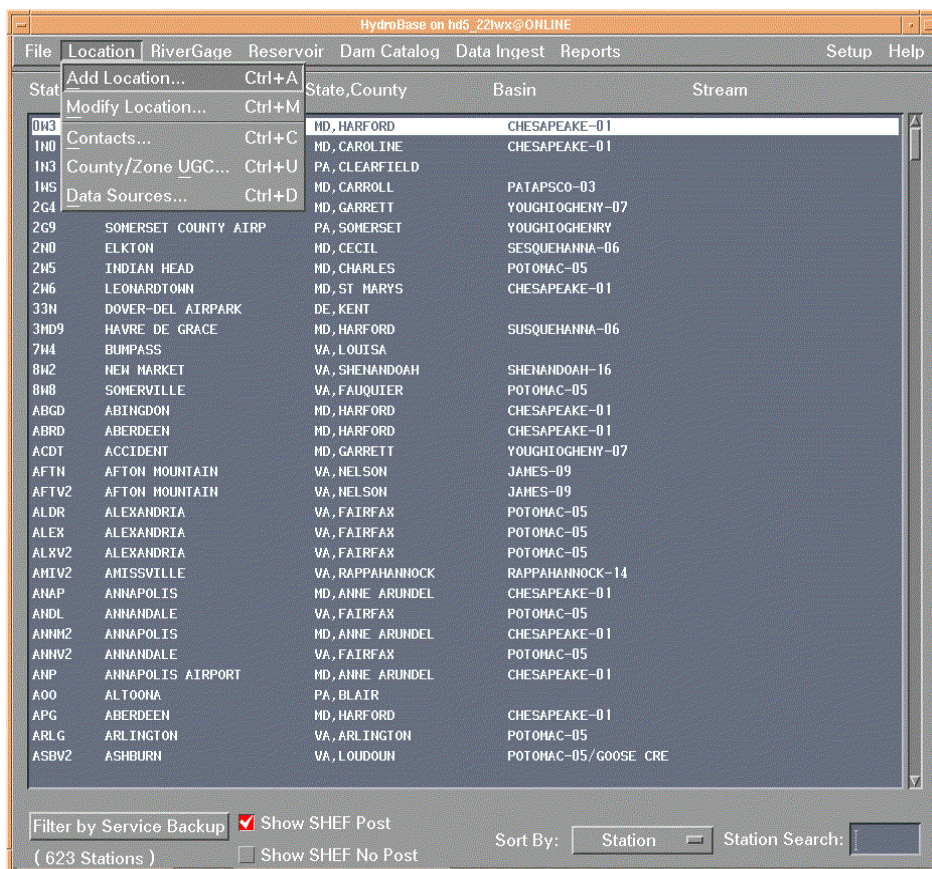


Access this selection from the **Root Window** by *Clicking* on **File, Preferences**.

Notes:

- The Window Title String selection determines whether the screens viewed in HydroBase have the station Handbook V Identifier (CHB5 ID) and/or the location name displayed at the top of the window.
- Due to display width restrictions, a maximum of three additional data fields can be displayed in the main window.
- Display lists may be sorted by station ID, by name, or by State, County.

HydroBase Root Window (Location selected from the Menu Bar) - Use this selection to add, review, and edit location data for a selected station, including contacts, universal generic code (UGC), and data sources information.



Access this selection from the **Root Window** by *Clicking on Location*.

Add Location Window - Use this selection to add a new location to the database. Shown are the Geophysical and Additional Info screens (both are used to add a new location).

Select Geophysical (this screen) or Additional Info (bottom screen).

Complete as required to add a new location to the database.

Copy to New Location is not used for this application.

Remarks can be used to clarify gage location, for example.

Additional Info screen - complete as required to add a new location to the database.

Setup and Apply Cooperating Agencies - complete to define and associate additional agencies or offices with a station location.

Access this selection from the **Root Window** by *Clicking* on **Location, Add Location**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open.

Modify Location Window - Use this selection to view and edit location data from the selected station.

Select Geophysical (screen shown) or Additional Info (same screen as shown for Add Location Window).

Copy to New Location allows saving the data selected to a new station ID without using the Add Location Window.

Modify Location - 0W3 - CHURCHVILLE

Page **Geophysical** Copy to New Location

Geographic/Physical

Location: ☐ Inactive ☐ Revise:

Name:

Basin: Detail:

Lat/Lon: Network:

Elevation: HSA:

Station Num: WFO:

County/State: RFC:

Time Zone:

Remarks

Station Characteristics (View-Only)

Station Type:

☐ Forecast Point ☐ Reservoir ☐ Snow ☒ Other

☐ River Data ☒ Precipitation ☒ Temp ☐ Undefined

Data Sources:

☒ Dcp ☒ Observer

☒ Telemetry

To delete a location, Click on Delete and respond to the confirmation prompt.

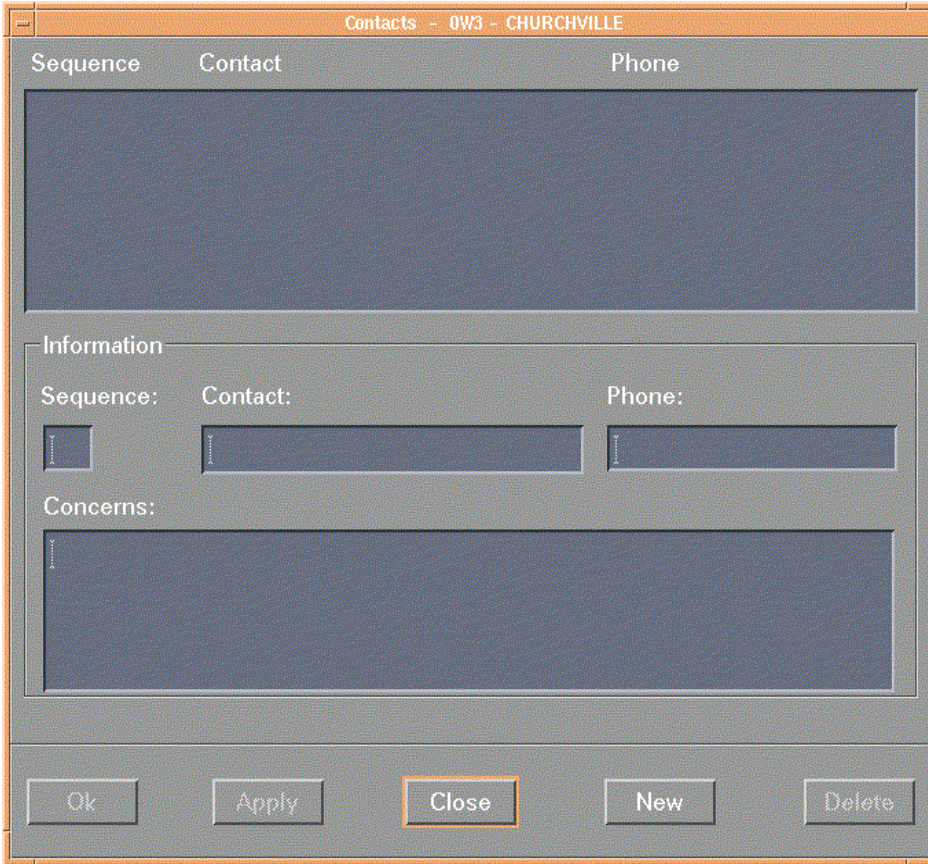
Access this selection from the **Root Window** by Clicking on **Location, Modify Location**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open.

Contacts Window - Use this selection to view and edit contact data and information from the selected station.

Select contact to view information (as shown below).

View and edit contact information.



Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **Location, Contacts**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

County/Zone UGC Window - Use this selection to view and edit county and zone Universal Generic Code (UGC) information from the selected station.

Select Counties or Zones (available and selected information will be displayed below).

Use Add, Delete, or Clear to modify the selected counties or zones for the selected station. Delete will delete the highlighted Selected county or zone. Clear will delete ALL Selected counties or zones.

Access this selection from the **Root Window** by *Clicking* on **Location, County/Zone UGC**.

Notes: *Click OK* to incorporate changes and close window. *Click Apply* to incorporate changes and keep the window open.
This information is used by the product formatter, RiverPro, when assembling UGCs for the product header.

Data Sources Window - Use this selection to view and edit data source information (DCP, Observer, and Telemetry data source types) from the selected station.

View and edit information.

Information such as observer home telephone number, SSN, source cost, and rate are normally optional and are often left blank.

The screenshot shows the 'Data Sources - BKB12 - BURKBURNETT' window with 'Type' set to 'Observer'. The 'Observer' section includes fields for First Name (blank), I/Last Name (L. E. Hibbard), Address (City Library, 606 South Harwell), City (BURKBURNETT), State (TX), Zip (76354), DoS (03/01/1979), Home (817/569-5060), Work (817/569-2991), SSN (blank), and Gender (radio buttons for M, F, I, with F selected). The 'Administration' section includes Comms (PHONE), Task No (blank), Sponsor (S & E), Rate (0.00), CD-404 (blank), Recip (WFO OUN), and Report (BACKUP: ALSO, TOMMY THORNTON - POLICE 817-569-2231). At the bottom are Apply, Close, and Delete buttons.

Observer Screen

The screenshot shows the 'Data Sources - BKB12 - BURKBURNETT' window with 'Type' set to 'DCP'. The 'General' section includes Owner (USGS), GOES ID (CE2955E4), Reporting Time (00:18:00), and Reporting Frequency (240). The 'Criteria' section is empty. At the bottom are Apply, Close, and Delete buttons.

DCP Screen

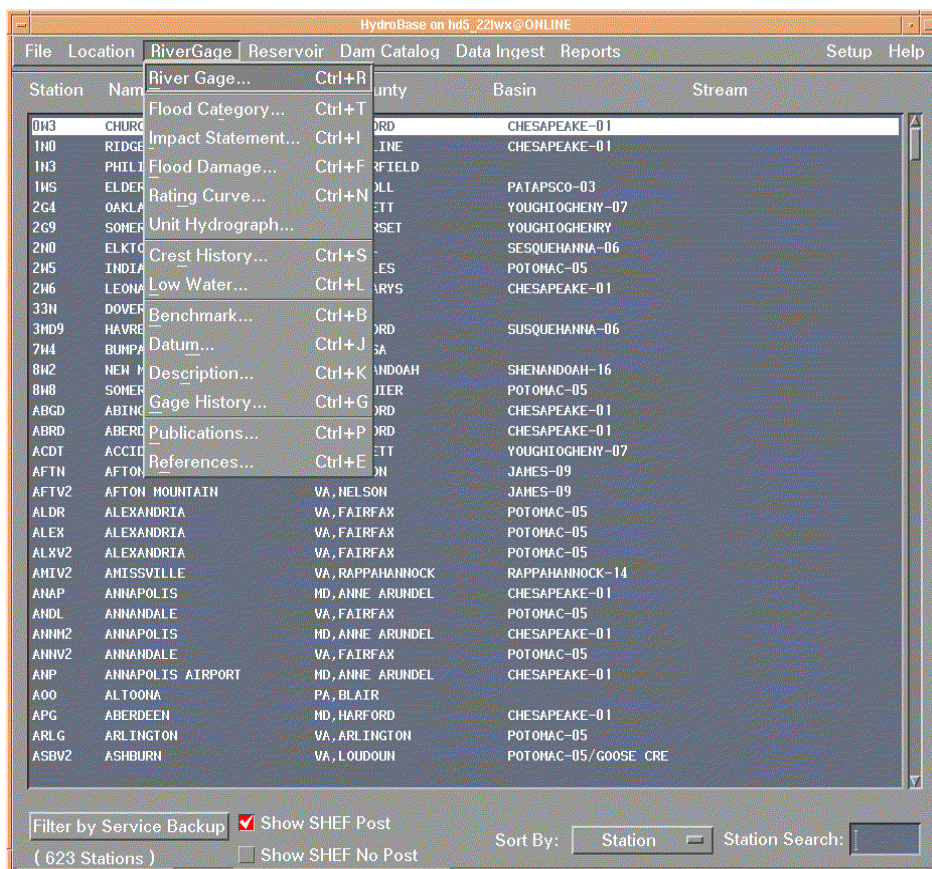
The screenshot shows the 'Data Sources - BKB12 - BURKBURNETT' window with 'Type' set to 'Telemetry'. The 'General' section includes Telemetry (ALERT), Owner (BLACKWELL), Payor (ARDMORE CD), Phone (blank), Cost (blank), Sensor Id (blank), and Reporting Frequency (blank). The 'Criteria' section is empty. At the bottom are Apply, Close, and Delete buttons.

Telemetry Screen

Access this selection from the **Root Window** by *Clicking* on **Location, Data Sources**.

Notes: To delete a data source, *Click* on Delete and respond to the confirmation prompt.
Click OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open.

HydroBase Root Window (RiverGage selected from the Menu Bar) - Use this selection to view and edit river gage-related information and data from the selected station.



Access this selection from the **Root Window** by *Clicking* on **River Gage**.

River Gage Window - Use this selection to view and edit river gage information and data from the selected station. Shown are the Geophysical and Additional Info screens (both are used to view and modify river gage information and data).

Select Geophysical (this screen) or Additional Info (bottom screen)

View and modify geophysical information and data.

THE FLOOD STAGE AND ACTION STAGE VALUES MUST BE PROVIDED AS THEY ARE IMPORTANT FOR BOTH HYDROVIEW AND RIVERPRO

A FORECAST POINT GROUP ASSIGNMENT MUST BE MADE FOR THE STATION TO BE CONSIDERED FOR RIVERPRO

Select physical element to be used in the HydroView Displays and in RiverPro for variables such as <ObsStg> and <SpecFcstStg>

Select checkbox to include data from latest forecast time series only

View and modify additional information and data

Access this selection from the **Root Window** by *Clicking* on **RiverGage, River Gage**.

Notes: To delete a record, *Click* on Delete and respond to the confirmation prompt. *Click* OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open. The Use Latest Forecast When Computing Maximum Forecast Value checkbox is point-specific. It was moved from the Setup/Riverpro General Parameters menu option.

Flood Category Window - Use this selection to view and edit flood category definitions for a selected station.

View and edit flood category stage and discharge definitions.

THIS INFORMATION IS OF PARTICULAR IMPORTANCE TO RIVERPRO

Flood Category - BLU02 - BLUE		
	Stage	Discharge
Major:	36.0	44000
Moderate:	24.0	42700
Minor:	21.0	42400

Ok Cancel Delete

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Flood Category**.

Notes: To delete a record, *Click* on Delete and respond to the confirmation prompt.

Impact Statement Window - Use this selection to view and edit impact statement definitions for a selected station.

Select the stage. The stage characteristics and associated impact statement to view and edit will be displayed below.

View and edit stage characteristics and impact statement. Impact statements are included for each incremental stage increase. Season definitions can be January - December; however, seasonal impacts may be included if areas such as parks are more affected by lower stage levels at various times of the year.

Impact Statement - BLU02 - BLUE

Stage:	Begin:	End:	Tendency:
45.00	01/01	12/31	RISING
44.50	01/01	12/31	RISING
44.00	01/01	12/31	RISING
43.50	01/01	12/31	RISING
43.00	01/01	12/31	RISING
42.50	01/01	12/31	RISING

Characteristics

Stage: Begin (Seasonal):

Tendency: ☒ Rising ☐ Falling End (Seasonal):

Impact

VALLEY-WIDE FLOODING WILL EXTEND FROM NW TO SE BRYAN COUNTY, WHERE THE BLUE RIVER EMPTIES INTO THE RED RIVER. UPSTREAM IN SE JOHNSTON COUNTY, FLOODING WILL BEGIN MANY HOURS BEFORE THE CREST TIME AT THE GAGE NEAR BLUE. DOWNSTREAM NEAR WADE, FLOODING MAYLINGER FOR DAYS. ARMSTRONG WILL SEE LIFE-THREATENING FLOWS AT DEPTHS NEAR 5 FEET AND PROBABLE DESTRUCTION OF HOUSES AND BUSINESSES. HIGHWAYS CLOSED WILL INCLUDE: US 70 WEST OF BLUE (EAST OF DURANT); SH 48 NEAR ARMSTRONG; 70E NEAR WADE.

Ok Apply Cancel New Delete Print All Save to File

Click New to add a new stage and associated impact statement to the database.

Click Delete to delete stage/impact statement from the database.

Click Print All to make a hard copy of stage characteristics and impact statement for all stages.

Click Save to File to save the stage/impact statements for all stages to a separate file.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Impact Statement**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry. The impact statements are included directly in the phrases generated by the product formatter, RiverPro.

Flood Damage Window - Use this selection to view and edit flood damage statements for a selected station.

Select the stage. The associated flood damage statement to view and edit will be displayed below.

View and edit flood damage impact statement. Impact statements are included for each incremental stage increase.

Flood Damage - BLU02 - BLUE

Stage	Display Statement
46.00	TOP OF LEVEE - CADDO STATE FISH HATCHERY NEAR ARMSTRONG
44.20	14 OCT 1981- \$100K DAMAGES IN ARMSTRONG: RESID. & COMMERC.
44.19	10/14/81 - CLOSED: SH 48 N OF DURANT & 70E NR SMITH-LEE
44.00	CRITICAL STAGE - US HWY 70 NR BLUE (EAST OF DURANT)
21.00	OFFICIAL FLOOD STAGE - RURAL ROADS & AGRICULTURAL LANDS

Statement

Stage: 46.00

Display: TOP OF LEVEE - CADDO STATE FISH HATCHERY NEAR ARMSTRONG

Damage: Near top of levee, Caddo state fish hatchery near Armstrong.

Ok Apply Cancel New Delete

Click New to add a new stage and associated impact statement to the database. Click Delete to delete stage/impact statement from the database.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Flood Damage**.

Notes:

Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open.

Select New to enter data. This will clear the display of elements.

Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

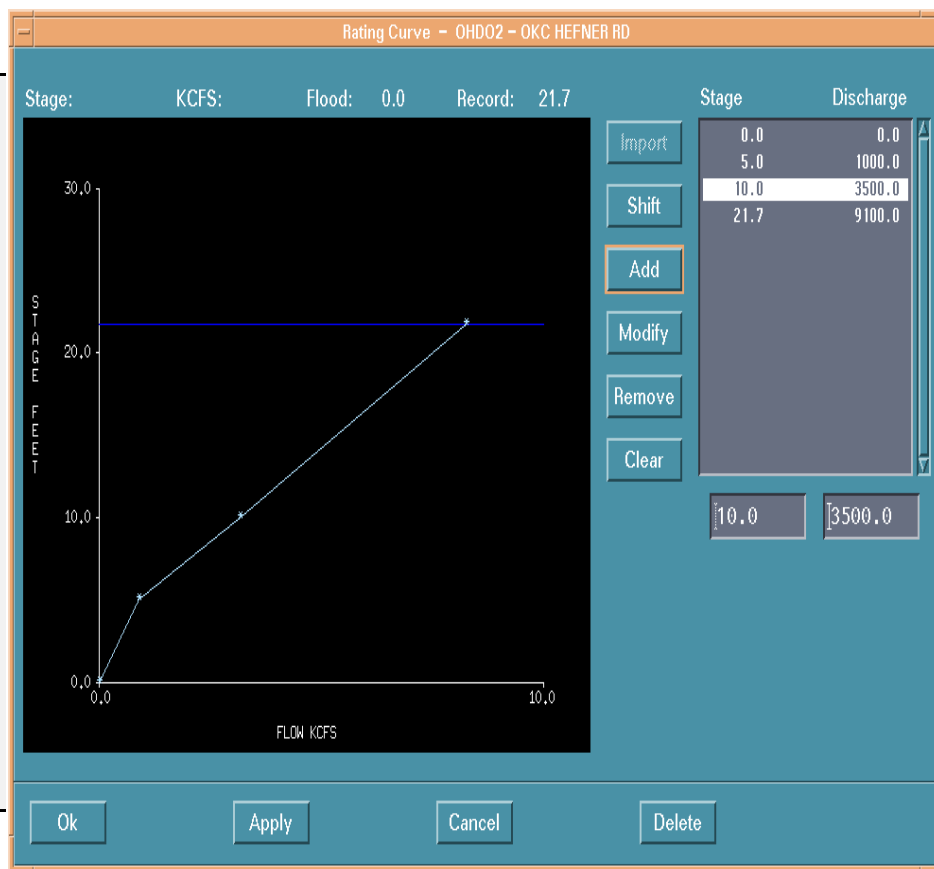
This information is not included in phrases generated by the product formatter, RiverPro. It is for internal use.

Rating Curve Window - Use this selection to view and edit the rating curve for a selected station.

The rating curve can be edited from the table at the right of the curve. Negative stage values can be entered.

Click within the graphical display area to display cross-hairs (values for stage and flow from the intersection of the cross-hairs are provided at the top of the display).

The blue horizontal line references the record stage and the red horizontal line references flood stage.



Deletes the rating curve from the database.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Rating Curve**.

Notes: *Click* OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open.

Unit Hydrograph Window - Use this selection to view and edit the unit hydrograph information for a selected station.

View and modify unit hydrograph information.

The window opens with a display of all unit hydrograph records that exist for the selected station in the Hydro Database. Individual records may be edited, added, and removed within the display without physically updating the database. When the OK, Apply, or Delete button is clicked, the Hydro Database is updated to reflect the current contents of the display (OK or Apply) or to delete all unit hydrograph records for the selected station (Delete with confirmation).

Use Add, Modify, Import, and Remove to add a new record, modify a selected record, import new records from a file, or remove a selected record in the above display of unit hydrograph records for the selected station.

Area ID	Dur	Ord	Discharge
FCKN1	1001	1	100.0
FCKN1	1001	2	200.0
FCKN1	1001	3	300.0
FCKN1	1001	4	400.0
FCKN1	1001	5	500.0
FCKN1	1001	6	600.0
FCKN1	1001	7	700.0
FCKN1	1001	8	800.0
FCKN1	1001	9	900.0
FCKN1	1001	10	1000.0
FCKN1	1001	11	1100.0

Selected record fields: Area ID: FCKN1, Dur: 1001, Ord: 1, Discharge: 100.0

Buttons: Add, Modify, Import, Remove, Ok, Apply, Delete, Cancel

Access this selection from the **Root Window** by *Clicking* on **River Gage, Unit Hydrograph**.

Notes: Click OK to incorporate all changes in the list of unit hydrographs list for the selected station and close the window. Click Apply to incorporate the changes and keep the window open. Click Cancel to cancel all changes made to the list without updating the database. To delete all unit hydrograph records for the selected station, Click on Delete and respond to the confirmation prompt.

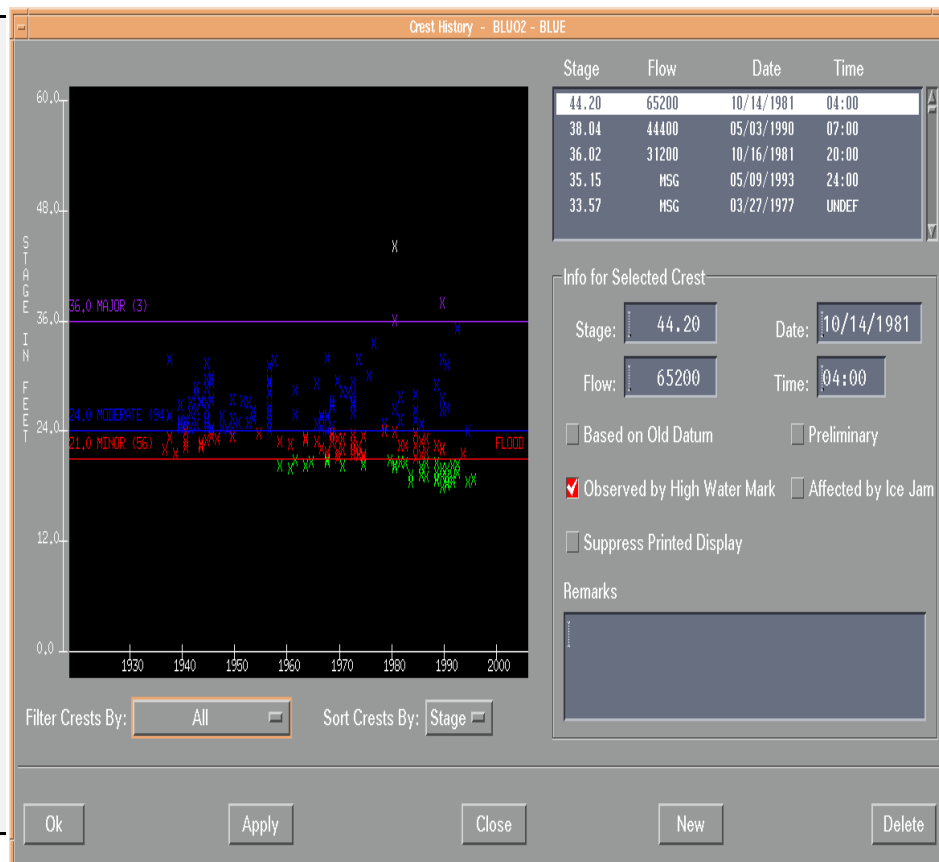
Crest History Window - Use this selection to view and edit data and information for historical crests for a selected station.

Historical crest information can be entered, edited, or deleted using the tabular section of the window.

A stage highlighted in the tabular section will also be highlighted in the graphical section of the window. Clicking on a data point in the graphical display will also highlight the stage in the tabular display.

Horizontal lines and data point colors on the graphical display indicate - major flood (purple), moderate flood (blue), minor flood (red) and action level (yellow).

Observation basis definitions - Old Datum (based on different input data), High Water (data from high water mark), Ice Jam (crest result of ice jam), Preliminary (crest not verified), and Suppress Printed Display (suppress data in Text Report E-19 crest history printout).



Filter options include All (all data points displayed), Above Action Stage (only data points above the action level are displayed), Below Action Stage (only data points below the action level are displayed).

Sort options include Stage, Date, and Flow.

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by Clicking on **RiverGage, Crest History**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Click Close to close the window (does not automatically incorporate changes). Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry. This information is used by RiverPro to generate product phrases.

Low Water Window - Use this selection to view and edit data and information for historical low water occurrences for a selected station.

View and edit information.

The window lists historical low flow stages (feet) and associated discharge (cubic feet per second).

Low Water - ANDO2 - ANADARKO

Stage	Flow	Date
	123	09/14/1990
	0	08/01/1964

Information

Stage:

Flow:

Date:

Notes:

Ok Apply Cancel New Delete

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Low Water**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

Benchmark Window - Use this selection to view and edit data and information for permanent survey benchmarks for a selected station.

Highlight a benchmark and edit below.

Number	Elevation
33XX	189.000

Information

Number: 33XX Elevation: 189.000

Description:
Mark on third pier of bridge crossing Highway 146
(this is an example only)

Ok Apply Cancel New Delete

Click New to add a new record or Delete to delete a selected record.

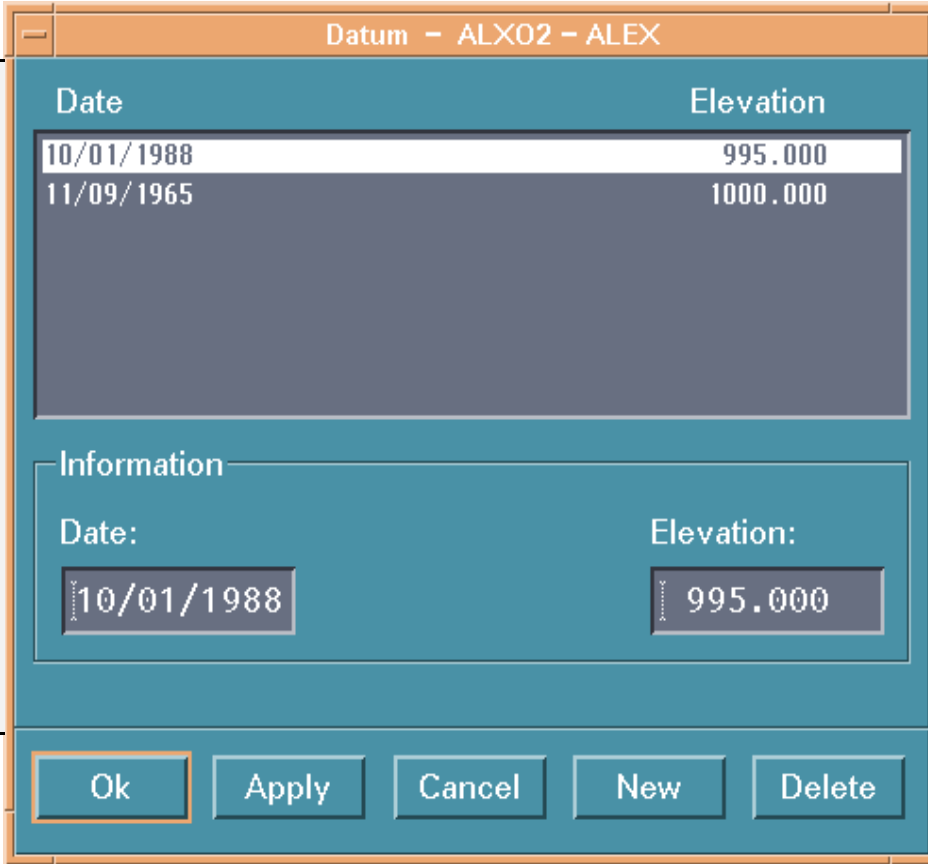
Access this selection from the **Root Window** by *Clicking* on **RiverGage, Benchmark**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

Datum Window - Use this selection to view and edit data and information for gage datum (elevation of gage zeros from mean sea level) for a selected station.

Highlight a datum entry and edit below.

Date refers to date when the initial datum was used. Elevation is in feet MSL of the gage zero.



Date	Elevation
10/01/1988	995.000
11/09/1965	1000.000

Information

Date: 10/01/1988 Elevation: 995.000

Ok Apply Cancel New Delete

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Datum**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

Description Window - Use this selection to view and edit general descriptive forecast point information for a selected station.

View and edit descriptive information for the river gage.

Proximity describes the proximity of the station to the actual physical location of the forecast point (Above, At, Below, In, Near, Undefined).

Divert describes any known diversions near the gaging location.

Regulation describes control structures upstream of the gaging location that impact flow.

Topography describes the topography along the river reach.

Other descriptors are self-explanatory.

AT
BELOW
Proximity: IN
NEAR
Stream Bed: UNDEF AND GRAVEL
Divert: STATE TROUT HATCHERY AND CITY OF DURANT WATER SUPPLY PUMPS
Remarks:
Freezing: SELDOM AFFECTED
Reach: NEAR HWY 69 NORTHEAST OF DURANT, DOWNSTREAM THROUGH ARMSTRONG TOWARD WADE
Regulation:
Topography: SEE USGS 7-1/2 MIN TOPO MAP: BLUE, OKLA. CHANNEL STRAIGHT FOR SOME DISTANCE US & DS, SKEWED TO BRIDGE; STEEP BANKS
Ok Cancel Delete

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Description**.

Notes: To delete a record, *Click* on Delete and respond to the confirmation prompt. *Click* OK to incorporate changes and close the window.

Gage History Window - Use this selection to view and edit historical gage information for a selected station.

Select entry to view information (as shown below).

View and edit gage history information for selected entry.

Type	Owner	Begin	End
TRANSDUCER	USGS	10/02/1988	08/09/1989
MANOMETER	USGS	07/07/1978	09/30/1986
MANOMETER	USDA ARS	01/01/1976	07/07/1978
STAFF	USDA ARS	09/02/1961	01/01/1978
MANOMETER	USDA ARS	09/01/1961	01/01/1978
CREST-STG	USGS	10/03/1988	

Information

Type: TRANSDUCER Begin: 10/02/1988

Owner: USGS End: 08/09/1989

Maint: USGS

Location

EQUIPMENT EVALUATION TEST: PRESSURE
TRANSDUCER ATTACHED TO CAMPBELL CR10 DATA
LOGGER, CONNECTED TO SM192 STORAGE MODULE.

Ok
Apply
Cancel
New
Delete

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Gage History**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

Publications Window - Use this selection to view and edit information about publications that contain data from the selected station.

Select a publications entry to view information (as shown below).

View and edit publications information for selected entry.

The screenshot shows a window titled "Publications - ALX02 - ALEX". Inside, there is a table with two columns: "Begin" and "End". The first row of the table contains the dates "10/01/1988" and "09/30/1986". Below the table, there is an "Information" section with three fields: "Begin" (containing "10/01/1988"), "End" (empty), and "Location" (containing "USGS - WRD OK"). At the bottom of the window are five buttons: "Ok", "Apply", "Cancel", "New", and "Delete".

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, Publications**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

References Window - Use this selection to view and edit information about references that describe where data records from the selected station are kept.

Select reference to view information (as shown below).

References - ALX02 - ALEX

Reference

USGS - WATER RESOURCES DATA FOR OKLAHOMA, ANNUAL THRU WY-1991

USGS - FORM 9-197, STATION DESCRIPTION, 2/21/90

USCE - OM 500-1-6, NATURAL DISASTER PROCEDURES UNDER PL 84-99, 11/91

NHS - HS FORM E-19, REPORT OF RIVER - GAGING STATION, 9/28/80

NHS - (HS FORM 531-5) REPORT OF RIVER - GAGING STATION, 9/23/76

USGS - WATER RESOURCES DATA FOR OKLAHOMA, ANNUAL THRU WY-1991

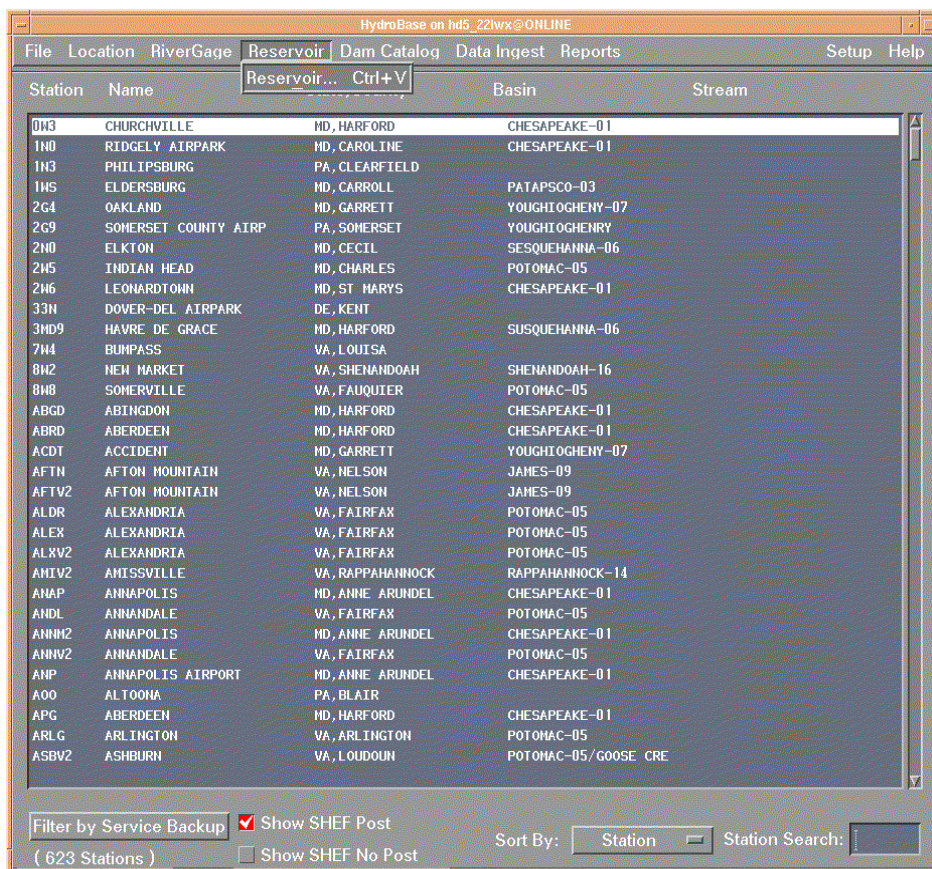
Ok Apply Cancel New Delete

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **RiverGage, References**.

Notes: Click OK to incorporate changes and close window. Click Apply to incorporate changes and keep the window open. Select New to enter data. This will clear the display of elements. Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

HydroBase Root Window (Reservoir selected from the Menu Bar) - Use this selection to view and edit reservoir-related information and data from the selected station.



Access this selection from the **Root Window** by *Clicking* on **Reservoir**.

Reservoir Window - Use this selection to view and edit reservoir information from the selected station. A station is a reservoir station primarily by virtue of filling out this window.

Select information to modify.

The reservoir can be associated to a particular dam through Dam Catalog by *Clicking* on **Associate this Reservoir with a Dam in Dam Catalog**. By *Clicking* on this option, the screen shown below appears. Once an associated dam has been identified (the dam ID will be displayed in the window), Dam Catalog can be used to display information regarding the dam.

Reservoir - ALTO2 - ALTUS/LUGERT DAM

Associate this Reservoir with a Dam in Dam Catalog

Information

Name: LUGERT/ALTUS LAKE Uses: ☒ Flood Control
☐ Hydroelectric
Impound Date: 01/01/1960 ☐ Low Flow Augmentation
☐ Navigation
Gates: 8 ☒ Recreation
Type: CONCR_EART ☒ Water Supply
Owner: USBR

Elevations

Max Surge: 1564.0
Top: 1571.0
Sill: 1547.0
Reservoir: 0.0

Pools

Flood: 1562.0
Spillway: 1559.0
Conservation: 1559.0
Dead: 1517.5

Ok Cancel Delete

Search for an associated dam within a defined area or by name. When using a name search, type in name in ALL CAPS.

Note: There is no link between the reservoir information and Dam Catalog. The associations must be established by the designated WFO HydroBase database manager through **Reservoir**.

Associate Reservoir - ALTO2 - ALTUS/LUGERT DAM

Search for Dams

☒ Perform an Area Search (use a square box with a sidelength of): 0.5 degrees
☐ Perform a Name Search: ALTUS/LUGERT DAM LUGERT/ALTUS LAKE

Dam Id	Lat	Lon	State	Name(s)
OK02500	34 53 00	99 10 00	OK	ALTUS / ALTUS RES, LAKE ALTUS
OK02901	34 52 00	99 10 00	OK	ALTUS AUXILIARY DIKE / ALTUS RES, LAKE ALTUS
OK02902	34 54 00	99 16 00	OK	ALTUS EAST DIKE / ALTUS RES, LAKE ALTUS
OK02903	34 53 00	99 17 00	OK	ALTUS LUGERT DIKE / ALTUS RES, LAKE ALTUS
OK02904	34 53 00	99 18 00	OK	ALTUS NORTH DIKE / ALTUS RES, LAKE ALTUS
OK21226	34 39 10	99 19 00	OK	ALTUS RESERVOIR /
OK02905	34 53 00	99 18 00	OK	ALTUS SOUTH DIKE / ALTUS RES, LAKE ALTUS
OK21306	35 00 10	99 17 12	OK	CELSOR, J.L. /
OK21549	34 40 12	99 32 06	OK	CHAPMAN, A.D. CSS NO.2 /
OK12414	35 05 36	99 21 30	OK	GOODEY, VERNA H. /
OK11027	35 01 54	99 06 30	OK	HUNTER /
OK20500	34 44 06	99 10 42	OK	MOUNTAIN PARK WEST DIKE / TOM STEED RES.
OK21152	34 57 36	99 20 42	OK	OKLAHOMA STATE OF REFORMATORY /
OK20718	34 44 48	99 16 36	OK	OKONAHNE 031000 /
OK21227	34 46 48	99 11 24	OK	OKONAHNE 065001 /
OK02202	34 44 30	99 11 24	OK	OKONAHNE 065002 /

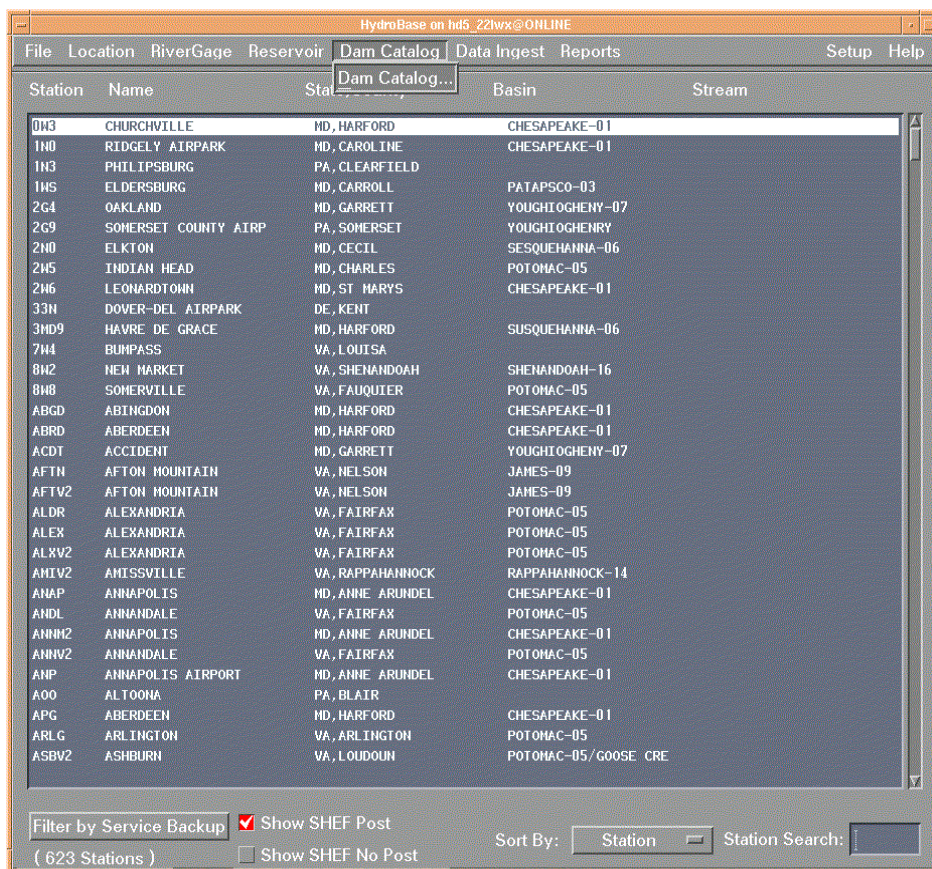
(33 Dams)

Ok Clear Cancel

Access the top screen from the **Root Window** by *Clicking* on **Reservoir, Reservoir**.

Notes: To delete a record, *Click* on **Delete** and respond to the confirmation prompt.

HydroBase Root Window (Dam Catalog selected from the Menu Bar) - Use this selection to access the Dam Catalog application.



Access this selection from the **Root Window** by *Clicking* on **Dam Catalog**.

Dam Catalog Window - Use this selection to view and edit information on dams within the region of interest. The initial dam catalog window (damcat) with a filtered list of dams is shown below.

List of dams using search filter below. Use View to view dam information, Edit to make changes to the dam information, Add to complete a blank template, and Delete to delete a selected dam from the data base.

Use Search/Filter Criteria to select dam(s) to view, edit, or delete. Information that can be viewed or edited includes General Information, Physical Dimensions, Reservoir Information, Agency Information, and Dam Break Information (dam break model output).

Select the required search criteria, then *Click* Apply Filter. The dam(s) that meet the criteria will be displayed above.

Use Trim Database to selectively delete dams from the database (state-by-state basis).

damcat

List of Dams which meet the criteria below

Dam ID	Name	River	Town	State	County	Lat	Long	WFO	RFC	Hazard
OK10301	ROBERT S. KERR LOCK	ARKANSAS RIVER	REDLAND	OK	SEQUOYAH	35.35	94.78	TSA	TUR	H
OK10304	WEBBERS FALLS LOCK	ARKANSAS RIVER	WEBBERS FALLS	OK	HUSKOGEE	35.55	95.17	TSA	TUR	H
OK10305	W.D. HAYO LOCK AND DAM	ARKANSAS RIVER	ARKHOMA	OK	LE FLORE	35.31	94.56	TSA	TUR	H
OK10309	KEYSTONE LAKE	ARKANSAS RIVER	SAND SPRINGS	OK	TULSA	36.15	96.25	TSA	TUR	H
OK20509	KAW	ARKANSAS RIVER	PONCA CITY	OK	KAY	36.70	96.92	OUN	TUR	H
OK21620	TULSA RIVER PARKS	ARKANSAS RIVER		OK	TULSA	36.12	96.99	TSA	TUR	L
OK22217	HILBERT KLINGER	ARKANSAS RIVER		OK	OSAGE	0.00	0.00	TSA	TUR	L

Number of Dams: 7

Search/Filter Criteria

ID: Name:

Downstream Town:

Contained within the area
 Latitude: to
 Longitude: to

County: ADAIR ALFALFA ALLEN
 State: OHIO OKLAHOMA OREGON
 River: AQUILLA CREEK ARBECA CREEK ARKANSAS RIVER

Hazard Level: HIGH LOW SIGNIFICANT
 RFC: ANR ATR CIN
 WFO: ABQ: Albuquerque, NM ABR: Aberdeen, SD AFC: Anchorage, AK

☒ Match ALL Criteria ☐ Match ANY Criteria

Sort Criteria

Sort list by the following field: ☒ ID ☐ Name ☐ River ☐ State/County

Access this selection from the **Root Window** by *Clicking* on **Dam Catalog**, then on **OK** in the **Running Dam Catalog Dialog Box**.

A list of **Dam Catalog Field Definitions** (used in this window and in dam information windows on the following page) is provided in Appendix B.

Notes: *Click* on the Help button for additional information.

Dam Catalog Window (Information Examples) - Displayed below are examples of data and information available through Dam Catalog when selecting View or Edit.

Dam Information

General Information | Physical Dimensions | Reservoir Information | Agency Information | Dam Break Information

ID: OK22217 Name: HILBERT KLINGER

Name: HILBERT KLINGER

Other Name:

Latitude: 0.00 Longitude: 0.00 Section/Township/Range: 330 T25N R03E1M

River: ARKANSAS RIVER State: OKLAHOMA

Non-Federal dam located on federal property: ☐ Yes ☒ No County: OSAGE

Owner Type: PRIVATE County Fips: 113

Owner: HILBERT KLINGER

Type: STORE TIMBER CRIB ARCH Purpose: RECREATION WATER SUPPLY TAILINGS

Year Completed: 1965

Emergency Action Plan: NO Potential Hazard Downstream: LOW

Phase I Inspection: ☐ Yes ☒ No Last Inspection Date:

Previous Dam Next Dam Save Dam Delete Dam Clear Page Close Help

General Information

Dam Information

General Information | Physical Dimensions | Reservoir Information | Agency Information | Dam Break Information

ID: OK22217 Name: HILBERT KLINGER

General Information

Length (feet): 0 Structural Height (feet): 40

Height (feet): 40 Hydraulic Height (feet): 40

Volume (cubic yards): 7300000 HHD Height (feet): 40

Spillway Information

Spillway Type: Spillway Width (feet): 0

Lock Information

Number of Locks: Locks Length (feet): 0 Locks Width (feet): 0

Previous Dam Next Dam Save Dam Delete Dam Clear Page Close Help

Physical Dimensions

Dam Information

General Information | Physical Dimensions | Reservoir Information | Agency Information | Dam Break Information

ID: OK22217 Name: HILBERT KLINGER

Maximum Storage (acre-feet): 530 Surface Area (acres): 35

Maximum Discharge (cu ft / sec): 0 Drainage Area (sq miles): 0

Normal Storage (acre-feet): 350

Previous Dam Next Dam Save Dam Delete Dam Clear Page Close Help

Reservoir Information

Dam Information

General Information | Physical Dimensions | Reservoir Information | Agency Information | Dam Break Information

ID: OK10004 Name: WEBBERS FALLS LOCK AND DAM 16

Weather Forecast Office: T54C Tulsa, OK

River Forecast Center: TUR

Primary Source ID: B0610

Primary Source: ICE Date: 32-07-1993

State Regulatory: OWRB

Supplemental Federal Source: US ARMY CORPS OF ENGINEERS Date: 32-07-1993

Federal Agency Funding: US ARMY US ARMY CORPS OF ENGINEERS US AIR FORCE

Federal Agency Construction: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Federal Agency Design: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Federal Agency Regulatory: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Federal Agency Inspection: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Federal Agency Operation: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Federal Agency Owner: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Federal Agency Other: US ARMY CORPS OF ENGINEERS US ARMY US AIR FORCE

Previous Dam Next Dam Save Dam Delete Dam Clear Page Close Help

Agency Information

Access these selections from the **Root Window** by *Clicking* on **Dam Catalog**, then, after selecting dams, on **View** or **Edit**.

Notes:

Click on the Help button for additional information.

The General Information screen will always be displayed first; for other selections, *Click* the appropriate button across the top of the screen.

Dam Catalog Window (Dam Break Information Example) - Displayed below is an example of dam break forecast data and information available through Dam Break.

Downstream information.

Dam break forecast information, based on model output.

Click on View Another Forecast to see model output results from different model runs or different models, if available. When using View Another Forecast, the dialog box shown at the right will appear and other model options can be selected.

Dam Information

General Information Physical Dimensions Reservoir Information Agency Information **Dam Break Information**

ID: OK10304 Name: WEBBERS FALLS LOCK AND DAM 16

Downstream Point Information

Name: WEBBERS FALLS Channel Slope: 6.00

Distance from Dam (miles): 5.00 Invert Elevation (feet):

Viewing Forecast 1 of 1

AT DAM LOCATION:

Peak Flow / Time: (cfs) / (minutes) 1978195.00 69.10 Estimated Breach Width: (feet) 336.00

Peak Depth / Time: (feet) / (minutes) 0.28 0.00 Estimated Fail Time: (minutes) 16.80

AT DOWNSTREAM LOCATION:

Peak Flow / Time: (cfs) / (minutes) 1199957.00 0.00 Travel Time (minutes) from Dam to City/Town:

Peak Depth / Time: (feet) / (minutes) 54.87 0.75

Flood Depth / Time: (feet) / (minutes)

MODEL RUN INFORMATION:

Forecast Basis / Time: (MM-DD-YYYY) 11-15-1997 10-15-1997 Description: Summer 1997

Model Run Type / Time: (type) / (MM-DD-YYYY) SIMPLE DAMBREAK 12-15-1997

Clear Forecast Delete Forecast Save Forecast View Another Forecast

Selection List

SIMPLE DAMBREAK

Selection: SIMPDBK

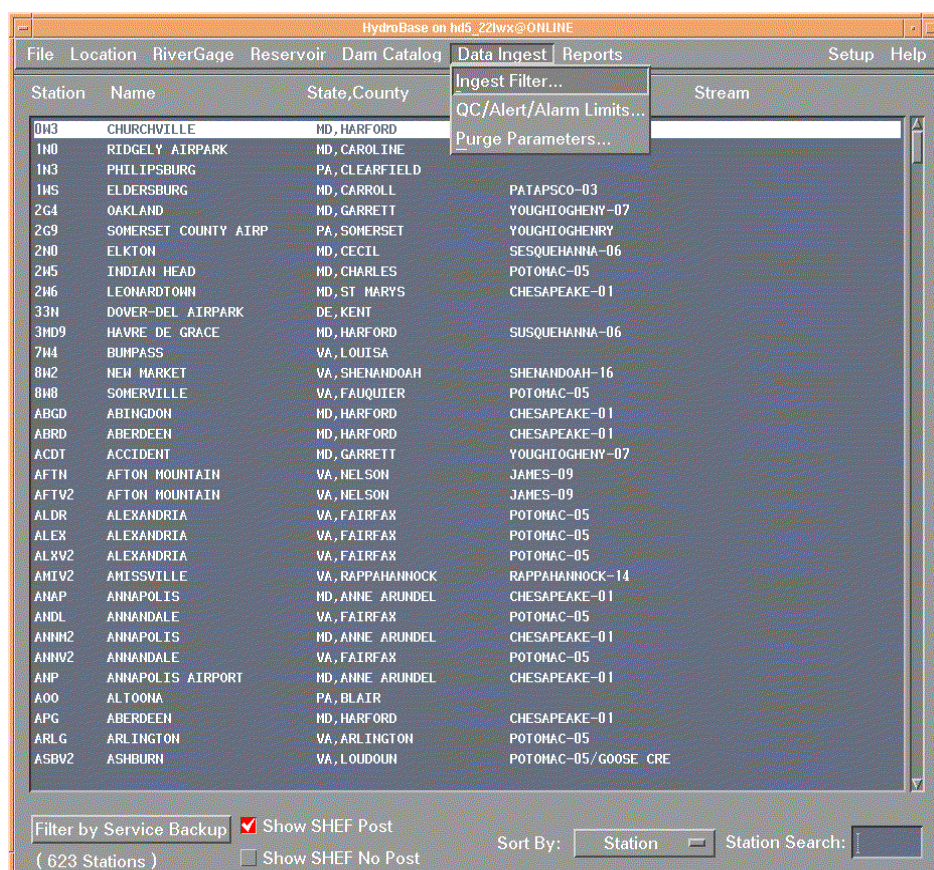
OK Clear Cancel Help

Previous Dam Next Dam Save Dam Delete Dam Clear Page Close Help

Access this selection from the **Root Window** by *Clicking* on **Dam Catalog**, then, after selecting dams, *Clicking* on **View** or **Edit**, then *Clicking* on **Dam Break Information**.

Notes: Click on the Help button for additional information.
Simple Dambreak is set as the default model for dam break forecasts.

HydroBase Root Window (Data Ingest selected from the Menu Bar) - Use this selection to view and edit ingest filter, QC/alert/alarm limits, and purge parameters (parameters that control data flows into and data storage in HydroBase).



Notes: The use of the windows presented in the Data Ingest pull-down menu is station-independent. (A station does not have to be selected prior to selecting a window; however, some windows require the selection of a station before viewing or editing data and information.)

Ingest Filter Window - Use this selection to view and edit ingest filter information (controls the flow of data into HydroBase).

Select station location and physical element to view and edit (as shown below).

Use Filter Parameters to filter the displayed list by location, physical element, service type, and switches (master, OFS, or MPE).

View and edit data ingest filter information.

Data Ingest Filter

Ingest Filter Contents for Locations

Location	PE	Dur	TypeSrc	Ext	Rank	Master	OFS	MPE
0W3	PA	0	RZ	Z	1	T	F	F
0W3	PL	0	RZ	Z	1	T	F	T
0W3	PP	1001	RZ	Z	1	T	F	T
0W3	PP	1006	RZ	Z	1	T	F	T
0W3	PT	0	RZ	Z	1	T	F	T
0W3	TA	0	RZ	Z	1	T	F	F
0W3	TD	0	RZ	Z	1	T	F	F
0W3	UD	0	RZ	Z	1	T	F	F
0W3	UQ	0	RZ	Z	1	T	F	F
0W3	US	0	RZ	Z	1	T	F	F
0W3	XC	0	RZ	Z	1	T	F	F
0W3	XH	0	RZ	Z	1	T	F	F
1N0	PC	0	RH	Z	1	T	F	T
1N0	SD	0	RH	Z	1	T	F	F
1N0	SH	0	RH	Z	1	T	F	F

Set Switches for All Listed Above ☐ ☐ ☐

Filter Parameters

Filter By: ☐ Location ☐ TypeSrc
☐ PhysElem ☐ Switches

Location:

PhysElem:
 AF Sfc Frost Intensity
 AG Percent Green Veg
 AH Sfc Dew Intensity
 AI Time Below 25 deg F

TypeSrc:

Switches: ☐ Master ☐ OFS ☐ MPE

Selected Item

Location:

Duration:

TypeSource:

Extremum:

Physical Element:
 PC Precip Accumulator
 PD 3-hour Press Change
 PE Press Characteristic
 PL Sea Level Pressure
 PH Prob Meas Precip

TypeSource Rank:

☒ Master Switch
☐ OFS Input Switch
☐ MPE Input Switch

Ok Apply Cancel New Delete

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **Data Ingest, Ingest Filter**.

Notes:

Click OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open.

Select New to enter data. This will clear the display of elements.

Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

Entries are automatically added to the data ingest information by the SHEF decoder as new data sets are processed by the WHFS.

Quality Control and Alert/Alarm Limits Window - Use this selection to view and edit quality control parameters for data flowing into HydroBase.

Select the list to display (default limits or location limits).

Select station location and/or physical element to view and edit (as shown below).

Use Filter Parameters to filter the displayed list by location or physical element.

View and edit Limits information for the selected item.

Quality Control and Alert/Alarm Limits

Limits

List: Filter By: ☐ Location ☐ PhysElem

Notes:

- 1) Changes to non-ROC limits take effect when SHEF decoder restarted.
- 2) Individual check is not performed if the limit value is not defined.
- 3) If limits defined for location, default limits not considered even if location limits are undefined.

Location	PE	Dur	Start	End	Gross Min	Gross Max	Reasonable Min	Reasonable Max	Rate Of Change	Alert Limit	Alert ROC	Alarm Limit	Alarm ROC
PP	1006	01/01	12/31		0.0	40.0							
PP	1008	01/01	12/31		0.0	40.0							
PP	1012	01/01	12/31		0.0	40.0							
PP	1018	01/01	12/31		0.0	50.0							
PP	2001	01/01	12/31		0.0	50.0							
PP	2007	01/01	12/31		0.0	200.0							
PP	3001	01/01	12/31		0.0	300.0							

Limits For Selected Item

Location:

Duration:

Start MM/DD:

End MM/DD:

Physical Element:

- PP Precip Increment
- PR Precip Rate
- PT Precip Type
- QA Adjusted Discharge
- QB Runoff Depth
- QC Runoff Volume
- QD Canal Divers. Dschrg
- QE Flow Diverted
- QF Discharge Velocity
- QG Generation Discharge
- QI Inflow Discharge
- QL Discharge Rule Curve

Quality Control Limits:

Gross Range:

Reasonable Range:

Rate Of Change (ROC): Units/Hour

Alert/Alarm Limits:

Alert: Alarm:

Value:

ROC:

Ok Apply Cancel New Delete

Click New to add a new record or Delete to delete a selected record.

Access this selection from the **Root Window** by *Clicking* on **Data Ingest, QC/Alert/Alarm Limits**.

Notes:

Click OK to incorporate changes and close window. *Click* Apply to incorporate changes and keep the window open.

Select New to enter data. This will clear the display of elements.

Modifying the elements and selecting Apply or OK will update the selected record - it will not create a new entry. Use New for a new entry.

When the actual range check is performed, a location-specific range is used if it exists for the location/physical element/duration combination; otherwise, the default range for the physical element/duration is used.

Purge Parameters Window - Use this selection to view and edit parameters controlling the storage requirements for observed and forecast data and products.

Select observed and forecast data table to view and edit Days/Hours to Keep (edit hours as shown below, number of days are calculated).

Select product ID to view and edit Versions to Keep (as shown below).

Data Purge Parameters

Observed and Forecast Data Purge Parameters

Table Name	Days/Hours to Keep	Time Field Name
agricultural	15/ 0 (360 hrs)	obstime
curprecip	3/12 (84 hrs)	obstime
discharge	15/ 0 (360 hrs)	obstime
dpaadapt	1/ 0 (24 hrs)	obstime
evaporation	15/ 0 (360 hrs)	obstime
ground	15/ 0 (360 hrs)	obstime

curprecip 84

Update

Product Purge Parameters

Product Id	Versions to Keep	Latest Product Time	Posting Time
DDCPNSDDC	3	1998-10-26 16:18:58	1998-10-26 16:20:58
DDCQPSDDC	3	1998-10-26 10:05:30	1998-10-26 10:20:30
DDCRR3DDC	5	1998-10-26 15:36:33	1998-10-26 15:37:33
DDCRR6DDC	0	1998-08-25 21:45:00	1998-08-25 21:47:28
DDCRR7DDC	3	1998-10-26 18:00:50	1998-10-26 18:03:50

DDCPNSDDC 3

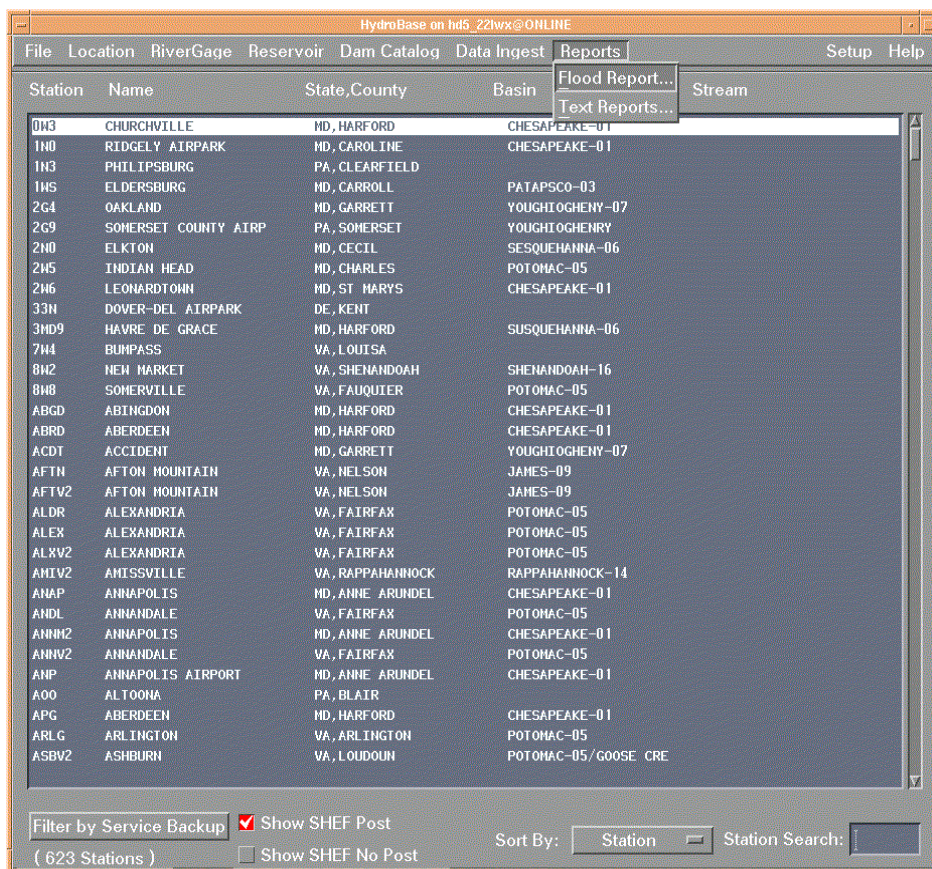
Add Update Delete

Ok

Access this selection from the **Root Window** by *Clicking* on **Data Ingest, Purge Parameters**.

Notes: Use Add to insert new Purge Parameter data and information, use Update to apply any changes, and use Delete to delete the highlighted records from the database.

HydroBase Root Window (Reports selected from the Menu Bar) - Use this selection to view flood and text reports in the database.



Access this selection from the **Root Window** by *Clicking on Reports*.

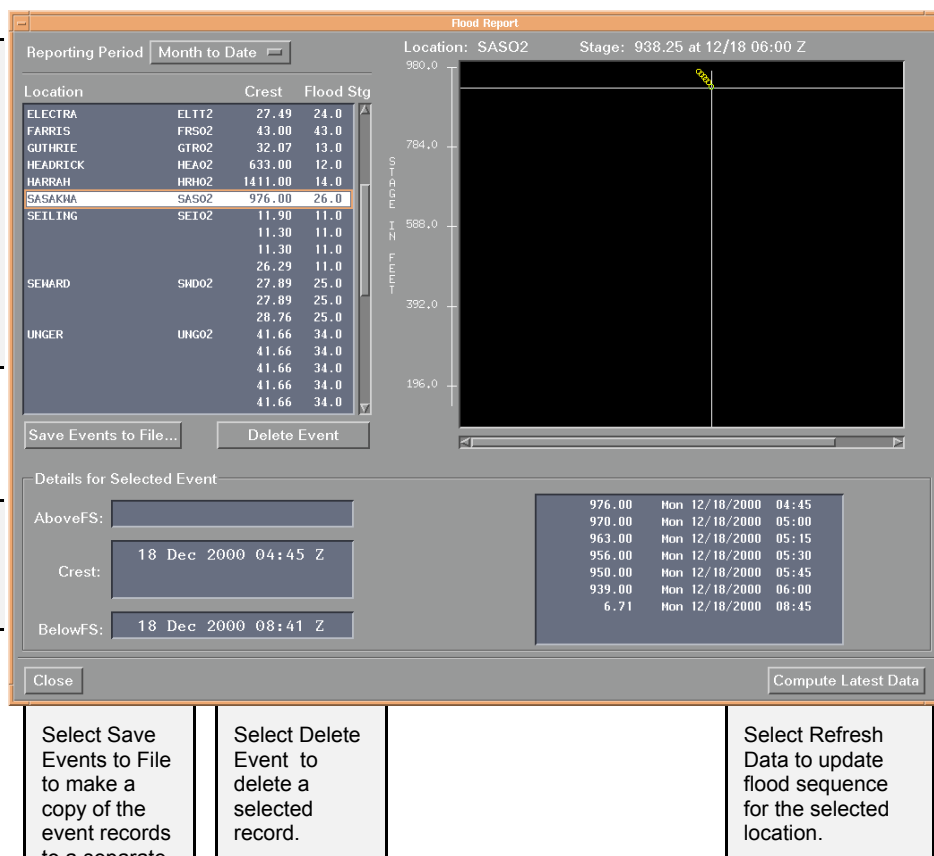
Notes: Text reports can be saved or printed (see Text Reports Window).

Flood Report Window - Use this selection to view flood hydrograph information at those locations that experienced flooding during the past twelve months .

Select reporting period - year-to-date, month-to-date, the last twelve months, or any one month in the last twelve months.

Locations with flooding will be displayed in the list. *Click* on a location to display the hydrograph. Use cross-hairs to display stage information from the hydrograph.

Significant times are relative to flood threshold and maximum stage.



Access this selection from the **Root Window** by *Clicking* on **Reports, Flood Report**.

Notes: Data and information are available for the number of months retained in the *floodts* table as defined in the Purge Parameters Window (see page 5-40).

Text Reports Window - Use this selection to view E-19 reports, cooperative observer reports, a sorted station list, a station classification list, and a service backup list.

E-19 Report - ALTUS - ALTUS/LUGERT DAM

Report: E-19 Page: Cover

NWS FORM E-19 (COVER)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
REPORT ON RIVER GAGE STATION

REVISED, PRINTED DATES: 11/03/1992, 12/20/2000

LOCATION: ALTUS/LUGERT DAM
STREAM: NORTH FORK RED RIVER
BASIN: RED 4 HSA: OUN

REFERENCES:
REFERENCE 1
REFERENCE 2

Close Print Save

E-19

Sorted Station List Report

Report: Sorted Station List Sort By: Location ID

12/20/2000 LIST OF LOCATIONS SORTED BY

LID	LOCATION	COUNTY	BASIN	WFO
AAS02	AGAWAM	ARS	GRADY	WASHITA 5
AB1	ABILENE	(ASOS)	TAYLOR	FWD
ARCA1	ARITICA		DADE	ARIZONA
ACB02	ARCADIA LAKE OUTFLOW	OKLAHOMA		CANADIAN
ACB02	ARDMORE	CARTER		WASHITA 5
ACB02	ARCADIA LAKE	OKLAHOMA		CANADIAN
ACB02	APACHE	CADDO		RED RIVER
AC122	ANCHER CITY (NW)	ANCHER		RED 10
ADAG2	ADA	PONTOTOC		CANADIAN 2
ADM	ARDMORE APT (ASOS)	CARTER		RED RIVER
AD502	ADA AIRPORT (D)	PONTOTOC		CANADIAN
AS02	AGAWAM	ARS	GRADY	WASHITA 5
AW	FW ALLIANCE AP	ASOS	TARRANT	RED RIVER
AS02	AGAWAM	ARS	GRADY	WASHITA 5
ARAG2	ATOKA	ATOKA		RED RIVER
ARCK1	ARKANSAS CITY	COMLEY		ARIZONA
ALG02	ALTUS IRRIG RES STA	JACKSON		RED 4
ALL02	ALLIN	PONTOTOC		CANADIAN 2
ALL12	ALLISON	WHEELER		WASHITA RIVER
AL502	ALTUS AGR STA (N)	JACKSON		RED RIVER
ALT02	ALTUS/LUGERT DAM	KIOWA		RED 4
ALV02	ALVA	WOODS		ARIZONA 1
AL302	ALEX	GRADY		WASHITA 5

Close Print Save

Sorted Station List

E-19A (Summary) Report - ALTUS - ALTUS/LUGERT DAM

Report: E-19A (Summary)

NWS FORM E-19A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
REPORT ON RIVER GAGE STATION

SITE

LID: ALT02 PROXIMITY: AT
NAME: ALTUS/LUGERT DAM
STREAM: NORTH FORK RED RIVER
COUNTY/STATE: KIOWA, OK BASIN: RED 4

DRAINAGE: 2315.00 FLOOD STAGE: 1559.00 STATION NO: 34-10B4-7
RIVER MILE: 73.50 ACTION STAGE: 1555.00 USGS NO: 07302500
ZERO DATUM: 1466.000 BANGS STAGE: 0.00 NWS ID: C1654424
CHECKRAB: 0.000 NORMAL POOL: 1559.00 RFC: ABRIC
LATITUDE: 34 53 08 TIDAL EFFECTS: None HSA: OUN
LONGITUDE: 99 17 43 FLOODGATES: MAJOR: 0.00
MODERATE: 0.00
MINOR: 0.00

PERIOD OF RECORD: 12/43-9/50, 10/50-

Observer: Bureau of Reclamation
Attn: Bill Hand
Altus Dam
Route 1, Box 34

SERVICE DATE: 06/01/1971 SPONSOR: LOCAL
Cd: WHS RATE: \$ 0.00
HOME PHONE:

Close Print Save

E-19A (Summary)

Station Class Report

Report: Station Class

12/20/2000 STATION CLASS REPORT Page 1

LID	STATION TYPE	DCP	OBSERVER	TELEMETRY DEVICE
AAS02	FD			MESONET
AB1	FTD	Yes	Yes	ASOS
ARCA1	D	Yes	Yes	
ACB02	D	Yes	Yes	
ACB02	D	Yes	Yes	
ACB02	D	Yes	Yes	
AC122	DPST	Yes	Yes	ALERT
ADAG2	PDST	Yes	Yes	NONE
ADM	PDST	Yes	Yes	NONE
AD502	PDST	Yes	Yes	MESONET
AE502	U			MESONET
AW	FTD	Yes	Yes	ASOS
AS02	U			MESONET
ARAG2	U			NONE
ARCK1	RFSD	Yes	Yes	NONE
ALG02	DPST	Yes	Yes	NONE
ALL02	PSO	Yes	Yes	NONE
ALL12	P			NONE
AL502	PDST	Yes	Yes	MESONET
ALT02	DPST	Yes	Yes	NONE
ALV02	RFSD	Yes	Yes	NONE
AL302	TP	Yes	Yes	NONE
AMB02	PSD	Yes	Yes	NONE

Close Print Save

Station Classification

B-44A (Cooperative) Report - ALTUS - ALTUS/LUGERT DAM

Report: B-44A (Cooperative)

NWS FORM B-44A

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
UNOFFICIAL COOPERATIVE STATION REPORT

IDENTIFICATION SECTION

Station Name: ALTUS/LUGERT DAM LID: ALT02
State: OK County: KIOWA
Latitude: 34 53 08 Elevation: 1525.00
Longitude: 99 17 43 Hydrologic Unit No: 11720303
Station Begin Date: 08/01/1945
River Basin: RED 4

OBSERVER SECTION

Observer: Bureau of Reclamation DOS: 06/01/1971 Gender: M
Address: Attn: Bill Hand
Altus Dam Home Phone: 405/563-2435
Route 1, Box 34 Office Phone: WFO OUN
LONG MSL Recipient: WFO OUN
OK 73655 Comm: NONE

Duties:

HSA: OUN WFO: OUN RFC: ABRIC

Close Print Save

B-44A (Cooperative)

Service Backup Report

Report: Service Backup Sort By: Station

12/20/2000 LIST OF LOCATIONS SORTED BY STATION ID Page 1

STATION ID	ST. COUNTY	WFO	PRIMARY BACKUP	SECONDARY BACKUP
AAS02	OK, GRADY	OUN	AMA	XXX
AB1	TX, TAYLOR	FWD	OUN	DOC
ARCA1	KY, HANOVER	ICT	XXX	XXX
ACB02	OK, OKLAHOMA	OUN	XXX	XXX
ACB02	OK, CARTER	OUN	XXX	XXX
ACB02	OK, OKLAHOMA	OUN	XXX	XXX
ACB02	OK, CADDO	OUN	XXX	XXX
AC122	TX, ANCHER	OUN	XXX	XXX
ADAG2	OK, PONTOTOC	OUN	XXX	XXX
ADM	OK, CARTER	OUN	XXX	XXX
AD502	OK, PONTOTOC	OUN	XXX	XXX
AE502	OK, GRADY	OUN	AMA	XXX
AW	TX, TARRANT	FWD	OUN	XXX
AS02	OK, GRADY	OUN	AMA	XXX
ARAG2	OK, ATOKA	OUN	XXX	XXX
ARCK1	KY, COMLEY	ICT	OUN	DOC
ALG02	OK, JACKSON	OUN	XXX	XXX
ALL02	OK, PONTOTOC	OUN	XXX	XXX
ALL12	TX, WHEELER	AMA	XXX	XXX
AL502	OK, JACKSON	OUN	XXX	XXX
ALT02	OK, KIOWA	OUN	XXX	XXX
ALV02	OK, WOODS	OUN	XXX	XXX
AL302	OK, GRADY	OUN	AMA	XXX
AMB02	OK, GRADY	OUN	AMA	XXX

Close Print Save

Service Backup

Access these selections from the **Root Window** by **Clicking on Reports, Text Reports.**

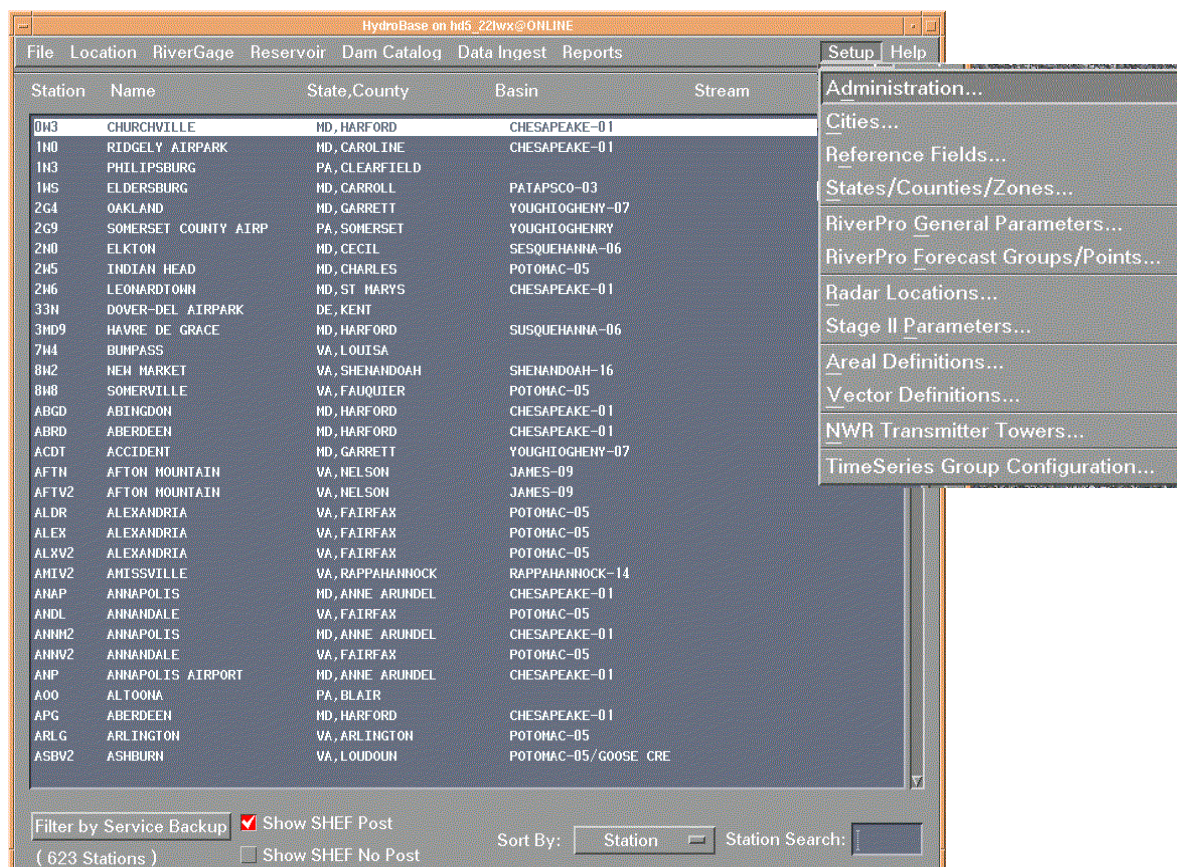
Notes: Use scrolls to display entire report.

Reports are read-only. Changes to data or information cannot be made.

Use Report pull-down menu to access the different reports.

Reports can be printed or saved to a specified file.

HydroBase Root Window (Setup selected from the Menu Bar) - Use this selection to view and edit various HydroBase reference data and information applicable to the entire HSA.



Access this selection from the **Root Window** by *Clicking* on **Setup**.

Notes: The use of the windows presented in the Setup pull-down menu is station-independent (a station does not have to be selected prior to selecting a window).

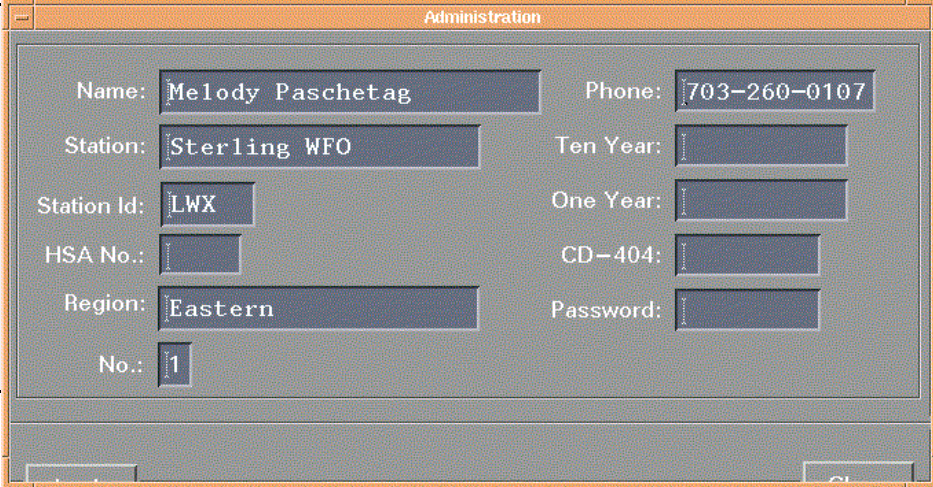
Administration Window - Use this selection to view and edit program administration information and to set the password for accessing HydroBase.

View and edit information.

Name, Station, Station ID, HSA No., Region, No. (Region No.), and phone refer to hydrologic focal point (e.g., Service Hydrologist).

Ten Year and One Year refer to E19A report dates.

CD-404 refers to the order form for paid observers.



The Administration window contains the following fields:

Field	Value
Name:	Melody Paschetag
Phone:	703-260-0107
Station:	Sterling WFO
Ten Year:	
Station Id:	LWX
One Year:	
HSA No.:	
CD-404:	
Region:	Eastern
Password:	
No.:	1

Enter the password used for controlling access to HydroBase. All blanks indicates no password is in effect. There is only one password for all HydroBase users.

Access this selection from the **Root Window** by *Clicking* on **Setup, Administration**.

Notes: This information is station-independent.
The Name/Station/Station Id/Region must be filled out for RiverPro to start up.

Cities Window - Use this selection to view and edit city and town reference information.

Select a city/town to view information (as shown below).

Precedence refers to city or town designation (1 or 2) shown in Display Precedence.

View and edit city information for the selected entry.

The screenshot shows a window titled "Cities" with a table of city data and an "Information" form below it.

City	State	Lat	Lon	Precedence	Pop
ARNETT	AR	35 54 00	94 02 00	2	0
ASHDOWN	AR	33 40 28	94 07 34	1	0
AVOCA	AR	36 24 00	94 04 23	2	0
BARLING	AR	35 19 31	94 18 00	2	0
BASHE	AR	35 19 00	94 26 00	2	0
BEATY	AR	36 27 00	94 31 00	2	0
BELLA VISTA	AR	36 28 05	94 17 40	2	0
BEN LOMOND	AR	33 50 04	94 06 54	2	0
BENTONVILLE	AR	36 22 08	94 12 17	2	0
BENTONVILLE BRANCH J	AR	36 20 00	94 07 00	2	0
BENTONVILLE MUNI ARP	AR	36 21 00	94 13 00	2	0

The "Information" form contains the following fields:

- City: BELLA VISTA
- State: AR
- Lat: 36 28 05
- Lon: 94 17 40
- Cities (1) / Towns (2) dropdown: Cities (1) is selected
- Precedence: (empty)
- Population: 0

At the bottom of the window are four buttons: Ok, Add, Update, and Delete.

Click on Add, Update, or Delete to add a record, modify an existing record, or delete a record.

Access this selection from the **Root Window** by *Clicking on Setup, Cities*.

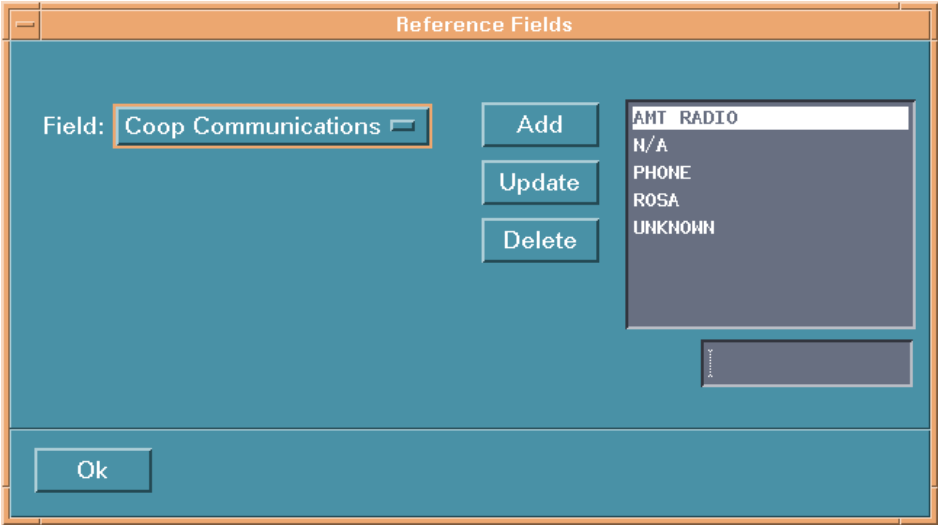
Notes: This information is station-independent.

Reference Fields Window - Use this selection to view and edit the data contributors reference information (e.g., data sources, measurement devices, equipment owners, sponsors, and supporting offices).

Select the field to view and edit.

The data field to the right of the window lists all contributors for the selected field item (not all contributors are shown).

Add, modify, or delete a contributor.



Access this selection from the **Root Window** by *Clicking* on **Setup, Reference Fields**.

Notes: This information is station-independent.
The above field items are attributes of other windows in HydroBase. The values defined in the Reference Fields Window serve to constrain the allowable values of these fields as they appear in other HydroBase windows.

States/Counties/Zones Window - Use this selection to view and edit state, county, and zone reference information.

Select state, county, and/or zone record(s) to view (as shown below).

Add, edit, or delete record(s).

The screenshot displays the 'States/Counties/Zones' window with three main sections:

- States:** A list of US states. 'DC District of Columbia' is selected.
- Counties:** A list of counties for the selected state (KS). 'FORD' is selected. Below the list, the 'State' is 'KS', 'County' is 'FORD', 'FIPS' is '057', and 'WFO' is 'DDC'.
- Zones:** A list of zones for the selected county (OK). 'CUSTER' is selected. Below the list, the 'State Num' is '16' and the 'Description' is 'CUSTER'.

At the bottom of each section are buttons for 'Add', 'Update', and 'Delete'. A 'Close' button is at the bottom center.

Access this selection from the **Root Window** by *Clicking* on **Setup, States/Counties/Zones**.

Notes: This information is station-independent. States/Counties/Zones must first be defined here. Once they are defined, they are then eligible to be assigned as attributes to individual points elsewhere in HydroBase.

RiverPro General Parameters Window - Use this selection to view and edit various RiverPro parameters.

Edit RiverPro configuration parameters - look back hours for observed data, look forward hours for forecast data, missing data codes, and expiration default hours for products.

RiverPro General Parameters

Time-Span Parameters

Number of Lookback Hours for Observed Data: 51

Number of Lookforward Hours for Forecast Data: 336

String to Use for Missing

Data Value: MSG

Stage Category: MSG

Data Time: MSG

Default Number of Hrs Before Expiration of

RVS: 24

FLS: 12

FLW: 12

Update

Close

Access this selection from the **Root Window** by *Clicking* on **Setup, RiverPro General Parameters**.

Notes: This information is station-independent.
Use the Update button to record any edits.

RiverPro Forecast Groups/Points Window - Use this selection to define forecast groups and to order the groups and their forecast points for tailoring RiverPro displays and generated products.

Select the forecast group to edit the order of groups for RiverPro displays and products.

Click Apply FcstGroup to record any edits.

Select the forecast point to edit the order of the point within the forecast group.

Click Apply FcstPoint to record any edits.

Group Id	Name	Order
NEWGRP1	NEW GROUP 1	5
03CHIKAS	CHIKASKIA RIVER	6
J250TST	J25 50 Q TEST	7
NCANRVUP	N CANADIAN RVR (UPR)	10
NCANRVMI	N CANADIAN RVR (MID)	11
NCANRVLO	N CANADIAN RVR (LOW)	12
CACHECR	CACHE CREEK	20

Selected Forecast Group

Group Id: Name: Order:

Ordering of Forecast Points within the Forecast Group

Point Id	Name	Order
MDH02	HOODHARD	1
SEI02	SEILING	2

Order:

Use to add a new group or to delete a selected group.

Access this selection from the **Root Window** by *Clicking* on **Setup, RiverPro Forecast Groups/Points**.

Notes: This information is station-independent.

Radar Locations Window - Use this selection to view and edit information and data for radars within the HSA.

Select radar to view information (as shown below).

View and edit radar information.

Add, modify, or delete records.

Radar Locations							
ID / Num	Name	State	Latitude	Longitude	Elevation	Height	Active
AKQ/000	Wakefield	VA	36 59 02	77 00 26	112.0	82.0	T
BIS/000	Bismarck	ND	46 45 00	100 45 00	0.0	82.0	T
CCX/000	State College	PA	40 55 23	78 00 13	2405.0	82.0	T
CRP/000	NWS Corpus Christi	TX	27 46 00	95 30 00	0.0	82.0	T
DIX/000	Philadelphia	PA	39 56 49	74 24 39	149.0	82.0	T
DOX/000	Dover AFB (DoD)	DE	38 49 32	75 26 23	50.0	82.0	T
FCX/000	Blacksburg	VA	37 01 28	80 16 26	2868.0	82.0	T
LWX/000	Sterling	VA	38 58 31	77 28 40	272.0	82.0	T
MHX/000	Moorehead City	NC	34 46 34	76 52 34	31.0	82.0	T

Parameters for Selected Radar

Radar Id: ☐ Active Latitude:

Radar Num: Longitude:

Name: Elevation:

State: Tower Height:

Add Update Delete

Close

Access this selection from the **Root Window** by *Clicking* on **Setup, Radar Locations**.

Notes: This information is station-independent.

Stage II Parameters Window - Use this selection to view and edit information and data for Stage II parameters for selected radars within the HSA.

Select radar to view information (as shown below).

View gages used in Stage II processing for selected radar.

Edit and update gage list.

All radars using the selected gage are displayed.

View and edit Stage II parameters for the selected radar.

Scroll to view all Stage II parameters.

The screenshot shows the 'Stage II Parameters' window. It contains three main sections:

- Radar ID Table:** A table with columns: Radar ID, Name, State, Latitude, Longitude. The selected row is TLX (Twin Lakes (Okla Cty)).
- Gages for Selected Radar:** A table with columns: Gage ID, Name, Latitude, Longitude. The selected gage is ACD02 (ARCADIA LAKE). To the right of this table are buttons: 'Create Updated Gage List for Selected Radar' and 'Review Create Gage List Log'. Further right is a box titled 'Radars using Selected Gage' containing a list: FDR, TLX, VNX.
- Stage II Parameters for Selected Radar:** A section with 'General Parameters' including:
 - Processing Method: Standard (dropdown)
 - Buttons: Perform Variance Calcs, Perform AP Removal
 - Min Precip to Display (mm): 0.25 (input field), 0.25 (default)
 - Max Radar Precip for QC (mm): 500 (input field), 500 (default)
 - Buttons: Perform Time Distribution
 - Max Num Gages to Use: 5 (input field), 5 (default)
 - Max Gage Duration (hrs): 5 (input field), 5 (default)
 - Parameters for Assumption of Zero-Precip: Value, Default

At the bottom of the window are 'Update' and 'OK' buttons.

Access this selection from the **Root Window** by *Clicking* on **Setup, Stage II Parameters**.

Notes: This information is station-independent.

Areal Definitions Window - Use this selection to view and edit areal definition information and data for zones, counties, basins, and reservoirs within the HSA.

Select the area location type and the area to view information (as shown below).

NumPts refers to the number of latitude and longitude pairs used to define the outline of the area.

View and edit area information.

Use Edit File to edit latitude and longitude pairs that define the outline of the selected area.

Use Review Import Log to view dates of changes to the data files.

Areal Definitions

List: **Zones** ☐ **Counties** ☐ **Basins** ☐ **Reservoirs** ☐

Area	Interior	Lat	Lon	NumPts
OKZ000		36 48 42	99 40 23	14
OKZ006	Alfa	36 43 18	98 50 34	52
OKZ007	Grant	36 46 47	98 21 54	7
OKZ008	Kay	36 47 46	97 50 02	7
OKZ009	Ellis	36 50 17	97 06 29	25
OKZ010	Woodward	36 12 55	99 42 52	32
OKZ011	Major	36 26 50	99 17 39	32
OKZ012	Garfield	36 19 39	98 33 47	25
		36 21 39	97 44 23	7

Data for Selected Area

Area Id: Latitude: Longitude:

Name:

Import/Export Operations

Import/Export File:

Access this selection from the **Root Window** by *Clicking* on **Setup, Areal Definitions**.

Notes: This information is station-independent.
 The import of data into the database from a file (Import/Export Operations) may take 5-15 seconds to complete.
 ASCII files of the base data for the map overlays are located in the */awips/hydroapps/whfs/local/data/geo* directory.

Vector Definitions Window - Use this selection to view and edit vector definition information and data for rivers, streams, highways, and roads within the HSA.

Select the vector location type and the vector to view information (as shown below).

Number of Points refers to the number of latitude and longitude pairs used to define the vector.

View and edit vector information.

Use Edit File to edit latitude and longitude pairs that define the selected vector.

Use Review Import Log to view dates of changes to the data files.

The screenshot shows the 'Vector Definitions' window. At the top, there is a 'List:' dropdown menu set to 'Highways'. Below this is a table with three columns: 'Vector Id', 'Name', and 'Number of Points'. The table contains six rows of data. Below the table is a section titled 'Import/Export Operations' which includes an 'Import/Export File:' text box containing 'hiways.dat', an 'Edit File' button, an 'Import File into Database' button, a 'Review Import Log' button, and an 'Export Database Info into File' button. At the bottom left is an 'OK' button. In the bottom right corner, a 'Text Editor - hiways.dat' window is open, displaying a list of latitude and longitude coordinates.

Vector Id	Name	Number of Points
R1I35	XXX	49
R1I35	XXX	529
R1I40	XXX	202
R1I40	XXX	381
R1I40	XXX	71
R1I40	XXX	60
R1I40	XXX	36

Import/Export Operations

Import/Export File:

Text Editor - hiways.dat

```

R1I35 XXX -1 49
36.9989 97.3425
36.9933 97.3453
36.9972 97.3475
36.9794 97.3486
36.9717 97.3492
36.9636 97.3489
36.9559 97.3467
36.9497 97.3458
36.9433 97.3464
36.9411 97.3483
36.9242 97.3486
36.9161 97.3500
36.9092 97.3514
36.9025 97.3519
36.8972 97.3522
36.8928 97.3522
36.8864 97.3519
36.8808 97.3519
36.8747 97.3506
36.8694 97.3489
36.8636 97.3461
36.8594 97.3439
36.8561 97.3414
  
```

Example Data File

Access this selection from the **Root Window** by *Clicking* on **Setup, Vector Definitions**.

Notes: This information is station-independent.
 ASCII files of the base data for the map overlays are located in the
 /awips/hydroapps/whfs/local/data/geo directory.

NWR Transmitter Window - Use this selection to view and edit NOAA Weather Radio (NWR) transmitter information.

Select a specific transmitter, then edit the appropriate field(s) in the work space below. Use Clear to clear all data and information, use Delete to delete the transmitter from the data base, and use Apply to effect the changes.

County coverage can be modified by adding a county from the Available Counties list or deleting a highlighted county.

NWR Transmitter

NWR Transmitter Information

Call Sign	WFO	Transmitter City	Transmitter County, State	Coverage Area	Lat	Lon	Freq.	Power	Prod. Code	Cnty. Num.
AAAAA	LUB	BBBBBBBBBBBBBBBB	XXXXXXXXXXXXXXXXXX	CCCCCCCCCCCCCCCCCCCC	00 00 00	00 00 00	123.456	9999	N29	9999
KEC55	FND	CROHLEY	, TX	FORT WORTH	32 32 13	97 24 46	0.000	0	NH1	000
KEC56	FND	DALLAS	, TX	DALLAS	32 55 19	96 45 01	0.000	0	NH2	000
KEC59	ICT	NICHITA	, KS	NICHITA	37 45 00	97 18 12	0.000	0	NH3	000
KIH27	TSA	COMETA	, OK	TULSA	36 01 08	95 39 24	0.000	0	NH4	000
NERB	DDC	Center City	KINGMAN	KS area just south of Austin	65 43 21	123 46 07	162.425	500	N30	33
NHF42	OUN	PONCA CITY	, OK	PONCA CITY	36 45 32	97 09 36	0.000	0	NH5	000
NHG22	DDC	TRIBUNE	, KS	TRIBUNE	38 27 22	101 38 56	0.000	0	NH6	000
NHG46	OUN	HOODHARD	, OK	HOODHARD	36 22 37	99 28 30	0.000	0	NH7	000
HRJ49	SHV	TEXARKANA	, AR	TEXARKANA	33 26 53	94 04 04	0.000	0	NH8	000
HRJ50	TSA	FORT CHAFFEE	, AR	FORT SMITH	35 17 38	94 18 25	0.000	0	NH9	000

Call Sign: ☒ Active Programming WFO: Coverage Area:

Lat/Lon: Frequency(Mhz): Power(Watts): Product Code:

City: County/State: Pseudo County Number:

County Coverage Information

Counties covered by Transmitter: WVG46

CLARK	KS
COMANCHE	KS
BEAVER	OK
CUSTER	OK
DEWEY	OK
ELLIS	OK
HARPER	OK
MAJOR	OK

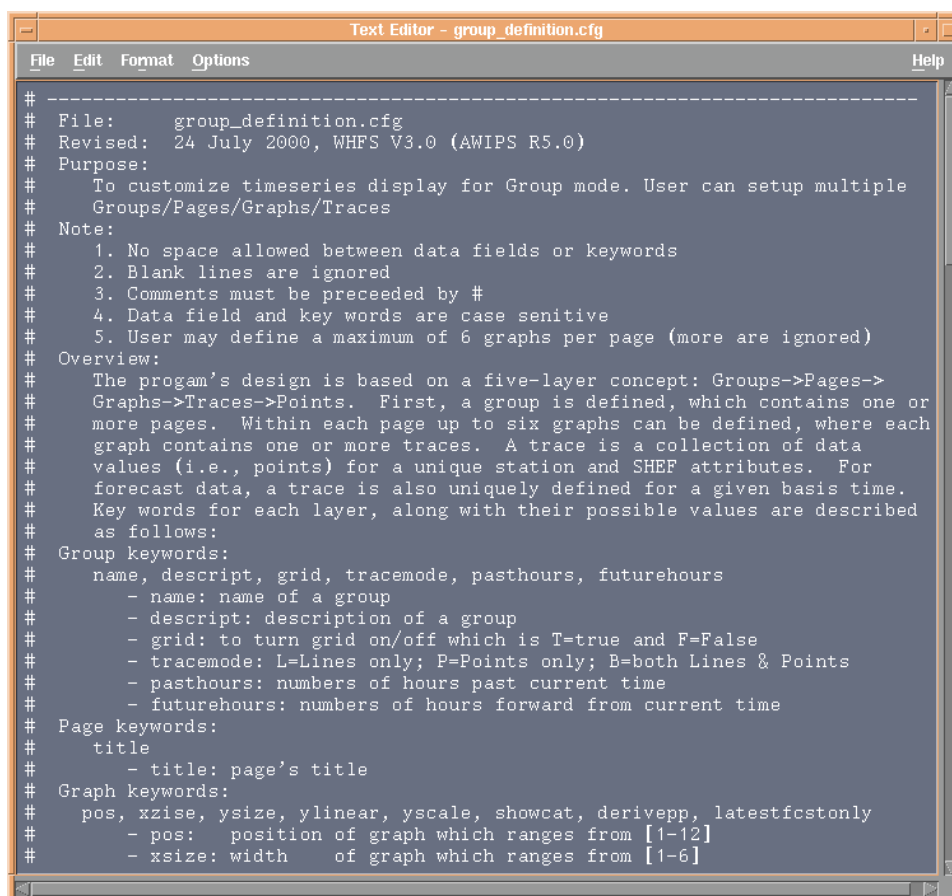
Available Counties

BARBER	KS
CHAUTAUQUA	KS
CLARK	KS
COMANCHE	KS
COMLEY	KS
FORD	KS
HARPER	KS
HASKELL	KS

Access this selection from the **Root Window** by *Clicking* on **Setup, NWR Transmitter Towers**.

Notes: This information is station-independent. Transmitter information must be properly defined for RiverPro to create NWR products. See Chapter 5 of the *RiverPro Reference Manual* for additional information. (The *RiverPro Reference Manual* has been included as Appendix A of this manual)

Time Series Group Configuration Window - Use this selection to configure and edit grouped time series displays.



```
# -----
# File:      group_definition.cfg
# Revised:   24 July 2000, WHFS V3.0 (AWIPS R5.0)
# Purpose:
#   To customize timeseries display for Group mode. User can setup multiple
#   Groups/Pages/Graphs/Traces
# Note:
#   1. No space allowed between data fields or keywords
#   2. Blank lines are ignored
#   3. Comments must be preceeded by #
#   4. Data field and key words are case sensitive
#   5. User may define a maximum of 6 graphs per page (more are ignored)
# Overview:
#   The program's design is based on a five-layer concept: Groups->Pages->
#   Graphs->Traces->Points. First, a group is defined, which contains one or
#   more pages. Within each page up to six graphs can be defined, where each
#   graph contains one or more traces. A trace is a collection of data
#   values (i.e., points) for a unique station and SHEF attributes. For
#   forecast data, a trace is also uniquely defined for a given basis time.
#   Key words for each layer, along with their possible values are described
#   as follows:
# Group keywords:
#   name, descript, grid, tracemode, pasthours, futurehours
#   - name: name of a group
#   - descript: description of a group
#   - grid: to turn grid on/off which is T=true and F=False
#   - tracemode: L=Lines only; P=Points only; B=both Lines & Points
#   - pasthours: numbers of hours past current time
#   - futurehours: numbers of hours forward from current time
# Page keywords:
#   title
#   - title: page's title
# Graph keywords:
#   pos, xsize, ysize, ylinear, yscale, showcat, derivepp, latestfcstonly
#   - pos: position of graph which ranges from [1-12]
#   - xsize: width of graph which ranges from [1-6]
```

Access this selection from the **Root Window** by *Clicking* on **Setup, Time Series Group Configuration**.

Notes: More information about the configuration and use of time series groups is contained in Appendix C, *WHFS Time Series Function*. In addition, information may be found on the WHFS Support web page. Specifically, see: http://www.nws.noaa.gov/oh/hod_whfs/Build_5/ts_config_grp_defn.htm.